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TO

EXECUTIVE DOCUMENTS,

PRINTED BY ORDER OF

THE SENATE OF THE UNITED STATES,

SECOND SESSION, THIRTY-THIRD CONGRESS,

1854-'55.

IN TWELVE VOLUMES,

EXCLUSIVE OF DOCUMENTS NOS. 78* AND 79.†

Volume 1 *contains*....*No.* 1, *part* 1.
Volume 2 *contains*....*No.* 1, *part* 2.
Volume 3 *contains*....*No.* 1, *part* 3.
Volume 4 *contains*....*No.* 2.
Volume 5 *contains*....*No.* 3, *and Commerce and Navigation report.*
Volume 6 *contains*....*Nos.* 4 *to* 34 *inclusive, except No.* 10.
Volume 7 *contains*....*Nos.* 35 *to* 63 *inclusive, except No.* 42.
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Transmitting papers in relation to the claims of Gibbons and Kelly, with reports of the Commissioner of Customs thereon	7	53	1
Transmitting to the chairman of the Committee on Finance the report of experiments by Lieutenant Alexander, for testing the strength of wrought iron beams and girders to be used in buildings erected for custom-houses United States courts, and post offices, and recommending an appropriation for testing them on a larger scale	7	54	1
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Transmitting the report of the Superintendent of the Coast Survey	12	10	1
In relation to sites for light-houses and a marine hospital in Ohio	6	11	1
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In relation to the necessity of certain appropriations for the service of the Indian Department	6	26	1
Requesting that certain appropriations be made for the payment of the Cherokee Indians	6	29	1
In conjunction with the Postmaster General respecting sites, with schedules of proposals therefor, for court-houses and post offices in Philadelphia, New York, and Boston	6	30	1
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In relation to the claim of the Brotherton Indians	7	45	1
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Communicating reports of the Commanding General and Heads of Bureaus of the War Department, showing the operations of the army during the year 1854 (*For list of documents accompanying the above, see page* 27 *of same.*)	2	1	3
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33d CONGRESS, 2d Session. } SENATE. { Ex. Doc. No. 42.

REPORT

OF THE

COMMISSIONER OF PATENTS

FOR THE YEAR 1854.

ARTS AND MANUFACTURES.

VOLUME I.—TEXT.

WASHINGTON:
BEVERLEY TUCKER, PRINTER.
1855.

IN THE SENATE OF THE UNITED STATES, *February* 8, 1855.

Ordered, That there be printed, in addition to the usual number, twenty-seven thousand copies of that portion of the Report of the Commissioner of Patents which relates to Arts and Manufactures, two thousand of which shall be for the use of the Commissioner of Patents; and fifty-five thousand copies of that portion of the Report which relates to Agriculture, five thousand of which shall be for the use of the Commissioner of Patents.

Attest:

ASBURY DICKINS, *Secretary*.

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REPORT

OF THE

COMMISSIONER OF PATENTS.

UNITED STATES PATENT OFFICE, *January* 31, 1855.

SIR: I have the honor to submit the following report for the year 1854.

The condition of the office at the present time, and also as compared with previous years, will be seen in a general way by reference to the following statements, numbered 1, 2, 3, and 4.

No. 1.

Statement of moneys received at the Patent Office during the year 1854.

Received on applications for patents, reissues, additional improvements, and extensions, and on caveats, disclaimers, and appeals	$134,125 00
Received for copies, and for recording assignments	13,664 84
Amount reimbursed to patent fund, per act August 4, 1854	16,000 00
	163,789 84

No. 2.

Statement of expenditures from the Patent Fund during the year 1854.

Salaries	$51,000 85
Additional compensation, per act April 22, 1854, (including six months in 1853)	8,827 59
Temporary clerks	32,750 86
Books for the library	3,772 28
Contingent expenses	32,339 78
Agricultural statistics, and purchase of seeds	2,838 00
Librarian	700 00
Payments to judges in appeal cases	475 00

Refunding money paid by mistake	$302 00
Refunding money on withdrawals	34,139 96
Total amount	167,146 32
Excess of expenditures over receipts during the year	3,356 48
Excess of withdrawals this year over last	10,673 32

No. 3.

Statement of the Patent Fund.

Amount to the credit of the patent fund, January 1, 1854	$28,950 00
Amount paid in during the year 1854, including $16,000 reimbursed by the act of August 4, 1854	163,789 84
	192,739 84
From which deduct—	
Amount of expenditures during the year	167,146 32
Leaving in the treasury January 1, 1855	25,593 52

No. 4.

Table exhibiting the business of the office for fourteen years, ending December 31, 1854.

Years.	Applications filed.	Caveats filed.	Patents issued.	Cash received.	Cash expended.
1841	847	312	495	$40,413 01	$23,065 87
1842	761	291	517	36,505 68	31,241 48
1843	819	315	531	35,315 81	30,776 96
1844	1,045	380	502	42,509 26	36,344 73
1845	1,246	452	502	51,076 14	39,395 65
1846	1,272	448	619	50,264 16	46,158 71
1847	1,531	533	572	63,111 19	41,878 35
1848	1,628	607	660	67,576 69	58,905 84
1849	1,955	595	1,076	80,752 78	77,716 44
1850	2,193	602	995	86,927 05	80,100 95
1851	2,258	760	869	95,738 61	86,916 93
1852	2,639	996	1,020	112,056 34	95,916 91
1853	2,673	901	958	121,527 45	132,869 83
1854	3,324	868	1,902	163,789 84	167,146 32

From this last statement, it appears that 3,324 patents have been applied for within the past year, which is an increase of 651 over the applications of the previous year.

The number of patents issued in 1854 is nearly twice as great as in 1853.

The number of cases in the office awaiting examination on the first day of January, 1854, was stated, in the report of last year, to have

been 582. Owing to an imperfect mode of computation, this number was found to be incorrect. An actual count showed that there were really 823 cases on hand and undisposed of at the commencement of the past year. That number is now reduced to 89, so that the work of the office can hardly be regarded as being at all behindhand. Applications are now acted upon within a very few days after being made.

The receipts of money from all sources, during the past year, amount to $163,789 84, and the whole expenditure has been $167,146 32. This exceeds the receipts by $3,356 48. Among the receipts is included the sum of $16,000, refunded to the Patent Office for expenses incurred, partly in 1853 and partly in 1854, for fitting up the rooms of the new building, and for other similar purposes, so that the revenue arising from fees alone during the year 1854 has been only $147,789 84. This falls short of the actual expenditure by $19,356 48.

This excess of expenditure has resulted, partly, from the additional compensation allowed by the act of 22d of April, 1854, to clerks and other persons employed in the office; in accordance with which, the sum of $8,827 59 has been paid during the past year, as appears from the foregoing statement No. 2.

The expenditures have also been very much augmented during the year by the necessity of repairing a large number of the models in the office, and also of cleaning, varnishing, and removing them to their new receptacles.

The crowded condition in which it has heretofore been necessary to place them had resulted in numerous and great injuries, which it was incumbent on the office to repair. They will be, in a great degree, exempt from such injuries in future.

But the largest item of extraordinary expenditure has resulted from the augmentation of force necessary to dispose of the accumulation of arrearages before mentioned.

The number of cases now on hand is less, by 734, than that which existed a year previous.

The fees of these 734 cases (amounting to more than $20,000) were received in 1853; the labor has been performed, and the expense incurred, in 1854.

The entire income which has resulted from all the cases disposed of during the past year, has been greater than the whole expenditure of that year.

It is, therefore, possible that the receipts for the coming year may be nearly, or quite, equal to the expenditure, if rigidly confined to those things which are indispensably necessary. There are, however, some matters which, though not altogether indispensable, seem to commend themselves strongly to the favorable consideration of Congress, and which will call for some increase of expenditure in future. Among these may be reckoned, in the first instance, an increase of salary to some of the examiners. In the report for last year it was stated that the examining force had been augmented by placing an additional clerk in each of the examining rooms as a second assistant examiner. The despatch of business in the office was much facilitated by this arrangement, which was, however, found inadequate to the rapid

increase in the number of applications. It was therefore thought expedient to place several of the assistant examiners in charge of duties which had previously been intrusted only to the principal examiners.

Accordingly, on the first of April last, five of the assistant examiners were each intrusted with the charge of an independent examining desk; so that for nine months of the past year there have been eleven separate and independent examining rooms, with each an acting principal and assistant examiner. These assistant examiners who have thus been performing the duties of principals, and the clerks of the second class who have been acting as assistant examiners, seem to have just claims to be placed on a footing of equality, as to compensation, with others who are performing the same duties, and are subject to the same responsibilities. The necessary examinations cannot be made with proper promptness with a less force than ten principal and as many assistant examiners; and should the business of the office continue increasing, as it now promises, before the end of the present year we shall need twelve of each class of examiners. The number should, therefore, I think, be increased to that extent at once, or power given to the Commissioner so to increase it as soon as occasion requires.

The business of the Patent Office progresses, or lingers, in precise proportion to the efficiency of the examining corps. The increased expense of supplying a few additional examiners is trifling, in comparison with the advantage of having the business of examination despatched in a few days after the application is made, instead of obliging the applicant to wait as many months for that purpose.

The report for the year 1853 was illustrated with wood engravings, which, though somewhat imperfect, are believed to have added much to the value of that report, by rendering it vastly more intelligible than it could otherwise have been made. Steps have more recently been taken to improve still further in this particular, by providing copper-plate engravings for this purpose. A conditional contract has been made with a competent artist, which, if approved by Congress, will render the report for the year 1854 highly creditable to the office, and eminently useful to the public. I feel great confidence that the advantages resulting from these illustrations will fully justify the increased expenditure thereby rendered necessary.

The present rate of fees has been in existence for more than sixty years with but little variation. During that time the intrinsic value of money has been very essentially diminished. The labor and expense thrown upon the office has been more than doubled by the change which took place in 1836; and the additional compensation more recently provided for clerks and other persons employed in the office has still further contributed to swell the ratio of expenditure to that of revenue, and to call for a new tariff of fees, in order to prevent the necessity of curtailing the expenses of the office in a way which cannot but be prejudicial to the best interests of those by whom those fees will be paid.

It is believed that the inventors themselves would prefer a sufficient augmentation of the rate of fees, to enable the business of the office to be promptly and successfully conducted, rather than to save a few

dollars at the expense of great vexation and delay in obtaining official action upon their applications for patents.

In my last annual report, the attention of Congress was invited to the consideration of the propriety of abolishing all discrimination in the rate of fees as between citizens and aliens; subsequent reflection has only confirmed the opinion then entertained and expressed on that subject. Some of the beneficial results of the liberal policy then recommended in inducing a like liberality on the part of other nations, are already sufficiently obvious.

At the present time, the laws of Canada do not permit our citizens to obtain patents in that province under any circumstances; which causes great inconvenience and loss to our inventors. All machines invented here, can be made and used in Canada without any license from the American patentee; and the products of those machines can, with little trouble or expense, be brought into our markets to compete with like commodities manufactured here by persons who are obliged to pay for the right to use the patented machines for that purpose. This operates like a discriminating tariff against the home manufacturer, which cannot but be prejudicial to his interests.

Reliable information of a private character has, however, been received, to the effect that the Canadian Parliament is taking steps to remove this cause of complaint. A bill was introduced into that body at a recent session (which has been adjourned over to some time in the present month,) and is still pending, which contemplates allowing American inventors to obtain patents in Canada; and the only cause of doubt as to its becoming a law is believed to grow out of the enormous fee demanded by this office from all Canadian inventors. The proposed modification in our rate of fees, would doubtless be followed by the desired change in the Canadian law. This would remedy the difficulty complained of by our inventors above alluded to, so far as future patentees are concerned, and might perhaps do so in relation to patentees of a previous date.

It may be thought that we shall best attain our object by retaliatory measures. Such a course would be calculated to arouse angry and hostile feelings, rather than to lead to any final advantage to either party.

A course dictated by kindness and liberality, will soon dissolve the barriers which make nations strangers and enemies.

We can well afford to lead the way in a course of measures which will contribute no inconsiderable share towards rendering us and our Canadian neighbors practically one people.

I take the liberty of inviting the attention of Congress to the other matters treated of in my report for 1853, to which I have nothing to add at present.

Very respectfully, yours, &c., &c.,

CHARLES MASON,
Commissioner.

Hon. LINN BOYD,
Speaker of the House of Representatives.

CLASSIFIED LIST OF PATENTS THAT HAVE EXPIRED DURING THE YEAR 1854.

CLASS I.—AGRICULTURE, *including instruments and operations.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Bee-hives	Martin Engel	Easton, Pa.	April 15
Bee-hives	Robert Martin	Fairfield, Ohio	May 19
Butter, working and pressing, (additional improvement, July 20, 1841.)	Titus D. Gail	Eden, N. Y.	Oct. 10
Churn	Constant Webb	Wallingford, Conn	Nov. 26
Churn	A. & W. A. Crowell	Salisbury, Conn.	June 20
Corn-sheller	Porter A. Gladwin	Chester, Conn.	April 24
Cultivator, corn, &c.	Noah Barnes	East Hampton, N. Y.	Sept. 10
Grubs and bushes, extracting from land	Young William Short	Oglethorpe county, Ga.	Jan. 26
Hoes, garden	Charles S. Homer	Boston, Mass.	May 8
Hulling, husking, and shelling corn, (additional improvement, March 29, 1841.)	Samuel S. Allen	Miamisburg, Ohio	Jan. 15
Hulling machines	James McGregor	Saratoga, N. Y.	May 12
Hulling oats, barley, &c.	J. Andrews & E. Piper	Camden, Me.	Dec. 10
Hulling rice, &c.	Warner Groat	Troy, N. Y.	Aug. 28
Hulling rice, machinery for	Daniel Tomlinson	Brookfield, Conn.	May 12
Hulling rice, machinery for	William C. Grimes	York, Pa.	Oct. 8
Mowing, cutting grass under water	Jacob Hinds	Hindsburg, N. Y.	Sept. 5
Mowing machine	Seth Lamb	New York, N. Y.	June 20
Plough	William Bryant	Davidson county, Tenn	Mar. 31
Plough, combined	Jonathan Knodle	Bakersville, Md.	April 8
Plough, hill-side, (improvement on Teeter's plough.)	Daniel Gochnour, jr.	Conemaugh, Pa.	June 12
Plough, shares and cutters of, constructing and fastening.	Mahlon Smith	Tinicum, Pa.	Jan. 28
Seeding, planting corn, &c.	Samuel W. Cole	Chelsea, Mass.	Aug. 25
Seeding, planting machines	Martin Nichols	Clearfield, Pa.	Oct. 16
Seeding, seed-planters, (additional improvement, April 1, 1842.)	Lorenzo Bachelder Samuel L Bachelder	Hampstead, N. H. Haverhill, Mass.	April 30
Seeding, seed-planters	T. J. & G. F. Lewis	Boston, Mass.	June 27
Seeding, seed-planters	T. J. & G. F. Lewis	Boston, Mass.	June 27
Seeding, seed-planters, (additional improvement, May 4, 1841.)	Joseph Gibbons	Adrian, Mich.	Aug. 25
Seeding, seed-planting machine	George Page	Baltimore, Md.	May 25
Seeding, sowing cotton-seed	L. Miner & L. Felts	Yanceyville, N. C.	July 18
Smut machine	Jacob Russell	Jenner, Pa	April 24
Smut machine	Hiram Smith	Bethany, N. Y.	July 31
Smut machine	Amos Adams	Port Henry, N. Y.	Aug. 3
Smut machine	John Burch	Millport, N. Y.	Aug. 22
Smut machine, cleaning grain	Samuel Spangler	Stony Creek, Pa.	May 19
Smut machine, cleaning grain, &c., by machinery.	Edward Bradfield	Rochester, N. Y.	Sept. 19
Straw-cutter	Joseph Worley	Hawkins county, Tenn	June 20
Straw-cutter, feeding and pressing the straw.	Israel W. Groff	Lampeter, Pa.	April 30
Thrashing machine	David Stafford	Syracuse, N. Y.	May 19
Thrashing machine	James Cummings	Canonsburg, Pa.	Dec. 10
Thrashing machine, conducting the straw and grain from the thrasher.	Luther Whitman	Winthrop, Me.	Aug. 25
Thrashing machine, removing straw and separating the grain in.	John Criswell	Cecil, Pa.	Nov. 26
Thrashing machine, shaking the screen in	Jesse Lincoln	Uniontown, Pa.	May 8
Trees, protecting from the canker-worm, (additional improvement, April 24, 1841.)	Daniel Newhall	Lynn, Mass.	Oct. 31
Winnowing machine	Abel & Asahel Lomax	Clinton county, Ohio	May 8
Winnowing, separating garlic from grain	William C. Grimes	York, Pa.	Sept. 3
Winnowing, separating garlic from wheat	Jonathan F. Barrett	N. Granville, N. Y.	Oct. 31

Classified list of expired patents—Continued.

CLASS II.—METALLURGY, *and manufacture of metals and instruments therefor.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Bands, key, for obacco casks	James M. Talbot	Richmond, Va	Sept. 14
Brads, cutting	Henry Waterman	New York, N. Y	Jan. 10
Buckles and clasps	William Church	Citizen of U. S., now in Birmingham, Eng.	Feb. 18
Catches, oblique, &c., forming on plates, &c., of cast iron.	Jordon L. Mott	New York, N. Y	Dec. 1
Clasps of carpet bags	Jas. Sellers and Abraham L. Pennock.	Philadelphia, Pa	May 25
Dies for making door and other knobs of plate metal.	Lucien E. Hicks	Middletown, Conn	June 27
Forges and furnaces, apparatus for blowing, (antedated July 1, 1840.)	James A. Stewart	Springfield, Tenn	Aug. 18
Furnace, heating the blast of	William H. Phillips	Brooklyn, N. Y	Aug. 28
Furnace, puddling, manufacturing iron with anthracite coal, (re-issued March 18, 1841.)	Thos. Cooper	New York, N. Y	Aug. 25
Knob, door, of glass	Francis Draper	East Cambridge, Mass.	Sept. 10
Latch, door	Benjamin M. Bosworth	Warren, R. I.	Mar. 6
Latch, door	Oliver Judd	Cherry Valley, N. Y.	Dec. 10
Latch, knob, for doors, &c	L. & W. Hotchkiss	Derby, Conn	Mar. 6
Latch, thumb, (disclaimer, August 25, 1840.)	Eli W. Philos, & Jno. A. Blake	New Haven, Conn	July 21
Lock, door	Peter Rogers	Philadelphia, Pa.	Sept. 25
Lock, door, &c., alarm	David Edwards	McConnellsville, Ohio	Aug. 12
Lock, door, &c	August Prutzman	Philadelphia, Pa	Sept. 5
Lock, door, and key	Wm. M. Williams	England	Dec. 1
Nails, brads, &c., cutting	George W. Strong and Jonathan Dodge, assignees of Walter Hunt.	New York, N. Y	Nov. 13
Nails and spikes, wrought	John McCrone	Ellicott's Mills, Md	Feb. 21
Nails, wrought	Theophilus Somerby	Wells, Maine	Jan. 22
Padlocks for mail-bags	Solomon Andrews	Perth Amboy, N. J	Dec. 5
Pipes, machine for making, continuously, from lead.	Geo. Escol Sellers	Upper Darby, Pa	Dec. 17
Puddle-balls, &c., rolling, in the manufacture of iron.	Henry Burden	Troy, N. Y	Dec. 10
Punching sheet iron for stove-pipes	Samuel Davis	Mifflin, Pa	Feb. 21
Rivets, making	Oliver Edes and Andw. Holmes.	Braintree, Mass.	April 24
Rivets, making	Alph. Fobes & Fitch W. Taylor, assignees of Chas. Lyon and Alpheus Fobes.	New York, N. Y	Sept. 2
Saws, circular, cutting the teeth of	Eleazer Carver	Bridgewater, Mass	Aug. 12
Saws, filing and smoothing teeth of	Eleazer Carver	Bridgewater, Mass	Aug. 12
Screw-wrench	Hawley D. Clapp, assignee of Henry W. Hewet.	New York, N. Y	June 27
Screw-wrench	Stephen Kane, and Thomas and James Keane.	New York, N. Y	Aug. 12
Spikes, heading	William Thomas	Hingham, Mass	Mar. 14
Spikes, hook, or brad-headed, (antedated March 2, 1840.)	Henry Burden	Troy, N. Y	Sept. 2
Spring bolt for door and other locks	G. W. and Ezra B. Robinson	Boston, Mass	June 10
Spring, door	Wm. W. Smith and Benj. Mulliken, jr.	New York, N. Y	Nov. 13
Spring, door, for closing doors and gates.	Gardner Barton, jr	Shaftsbury, Vt	July 1
Stove-pipe, mouldings, &c., making	John Farrar	Cuyahoga, Ohio	Sept. 2

Classified list of expired patents—Continued.

CLASS III.—MANUFACTURES OF FIBROUS AND TEXTILE SUBSTANCES, *including machines for preparing fibres of wool, cotton, silk, fur, paper, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Braiding machine	Dudley D. Sacket	Westfield, Mass	Jan. 22
Braiding machine, braiding manilla	Daniel, Jesse, and Elisha Fitzgerald.	New York, N. Y	April 24
Cloth, &c., reducing worn out	Reuben Daniels	Woodstock, Vermont.	Oct. 10
Cloth, stretching, in process of fulling	Baxter D. Whitney and George W. Lawton.	Winchendon, Mass	Mar. 25
Cloth, taking wrinkles out of, while fulling	John Tillou	New Haven, Conn	Dec. 14
Cloth of various kinds, manufacturing	Reuben Daniels	Woodstock, Vt	Oct. 8
Cocooneries, removing the filth from hurdles.	Benjamin Benson	Smyrna, Del	Jan. 10
Cordage, clothes line, straining and preserving.	E. Allyn and C. B. Hildreth	Boston, Mass	Nov. 26
Cotton waste or rags, &c., dressing	Emery Smith	North Sudbury, Mass.	Sept. 10
Felt cloths, without spinning and weaving, machinery for.	Thomas R. Williamson	Citizen of U. S., now in London, Eng.	Dec. 14
Flax and hemp, preparing, preparatory to the various processes of cleaning and separating the fibres.	Sands Olcott	New Hope, Pa	Mar. 31
Flax and hemp, reducing the fibres of	Sands Olcott	Philadelphia, Pa	April
Flier, for twisting silk	Edward L. Young	Norfolk, Va	Oct.
Gin, cotton	Fones McCarthy	Demopolis, Ia	July 3
Gin, cotton, constructing and affixing the ribs or grates of saw-gins, (re-issued February 12, 1842.)	Asa Copeland, jr	Bridgewater, Mass	April 8
Hair, curled, carding and picking	Francis Harding	Cleveland, Ohio	Aug. 25
Hats, bonnets, &c., ironing and pressing	Richard Murdock	Baltimore, Md	June 17
Hats, bonnets, &c., straw, pressing and finishing.	William Chaplin	New York, N. Y	Sept. 10
Hats, buoyant, used as life-preservers	Samuel White White	England	Oct. 14
Hats, palm-leaf, pressing	Chester Gorham	Barre, Mass	Mar. 3
Hemp, &c., preparing and spinning, (re-issued March 12, 1844.)	Moses Day	Roxbury, Mass	April 30
Hemp, tarring slivers or bands of machinery for, and making oakum.	William Montgomery	Boston, Mass	Aug.
Knitting stockings, machine for	Benjamin Hutchinson	Springfield, Mass	Oct. 22
Loom, heddle, metallic, (antedated January 21, 1840.)	Charles Strong	Hartford, Vt	April 24
Loom, heddle stuff, making weavers' eye-harness.	Jno. Thorpe and Wm. G. Angell.	Providence, R. I	Feb. 26
Loom, power, weaving figured counterpanes.	Erastus B. Bigelow	Lancaster, Mass	April 24
Looms, temple, rotary	George Draper	Palmer, Mass	Oct. 28
Looms, shuttle, for weaving cloth	James Baldwin	Nashua, N. H	Jan. 31
Paper, card, machine for making	William Dickinson	Worcester, Mass	Sept. 3
Paper, making card	Edward L. Perkins	Boston, Mass	July 10
Paper-making, ruling, and cutting, at one operation.	John Ames	Springfield, Mass	July 31
Rags, boiling and washing, for the manufacture of paper.	George Spafford	Windham, Conn	Sept. 2
Silk, reeling, from the cocoons, machinery for.	George Heritage	Chestertown, Md	Dec. 19
Silk, skeining, machinery for	George Heritage	Chestertown, Md	Nov. 26
Spinning, mule, self-acting, for	Daniel Lapham, administrator of Benjamin Lapham, dec'd.	Adams, Mass	Sept. 25
Spinning, mule, self-acting for	William Mason	Taunton, Mass	Oct. 8
Spinning silk from cocoons, machinery for.	George Heritage	Chestertown, Md	Dec. 19
Stuffs in which the fibres of various materials are united with adhesive mixtures, machinery for manufacture of.	Thomas R. Williams (now in London.)	Newport, R. I	April 24
Wool, cleaning, from burs, &c., and ginning cotton.	Milton D. Whipple	East Douglass, Mass	Oct. 28
Wool, cotton, &c., picking and opening, (antedated October 30, 1839.)	George C. Kellogg and Phineas Gillett.	New Hartford, Conn	April 30
Yarn, washing and cleaning	Sands Olcott	Philadelphia, Pa	April 11

Classified list of expired patents—Continued.

CLASS IV.—CHEMICAL PROCESSES, MANUFACTURES, AND COMPOUNDS, *including medicine, dyeing, color-making, distilling, soap and candle making, mortars, cements, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Alkali, extracting from ashes in the manufacture of potass.	Jacob Osborn	Elyria, Ohio	July 18
Cement for covering buildings	Jacob Bump	Kirtland, Ohio	Sep. 3
Composition for rendering leather waterproof.	Charles F. Miller	Baltimore, Md	Aug. 28
Distilling, cooling the mash used in the process of.	Allen D. Ward	Minerva, Ky	Nov. 7
Gas, purifying, for illumination	Daniel Ganet	Richfield, N. Y	June 27
Lead, white, manufacture of	Horace Cory	England	Oct. 8
Lead, white, manufacture of	Smith Gardner	New York, N. Y	Aug. 28
Lead, white, preparing	James N. Treville	Christiansburg, Va	Mar. 31
Oil, lamp, ascertaining quality of	John W. Harris	Dorchester, Mass	Sep. 3
Paint, galvanic, protecting iron from rust	Lewis Knapp	New York	July 1
Paints, or pigments, improvement in mode of applying and preserving, (antedated October 7, 1839.)	Francis G. Spilsbury, Fanny Corbaux, Alexander S. Byrne.	England	July 10
Salt kettles, constructing and setting	Charles C. P. Crosby	Brooklyn, N. Y	Jan. 11
Soap frames, (antedated June 14, 1838)	Joseph B. Doe	London, England	Mar. 31
Solutions, decoctions, &c., evaporating, &c.	James W. W. Gordon	Baltimore, Md	Oct. 8
Tallow, preparing, for manufacture of candles, (antedated July 2, 1840.)	John Kirkman	New York, N. Y	Oct. 31

CLASS V.—CALORIFICS, *comprising lamps, fire-places, stoves, grates, furnaces for heating buildings, cooking apparatus, preparation of fuel, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Boilers, for heating water, &c	Daniel L. Pickard	Hartland, N. Y	Oct. 14
Cabooses, ships', and other cooking-stoves.	Loftus Wood	New York, N. Y	Nov. 26
Caldron and furnace combined	Jordan L. Mott	New York, N. Y	Dec. 1
Candlestick, improvement in	William Church	Citizen of U. States, now in England.	Mar. 28
Chimneys, draught of	Geo. H. Crosby	New Haven, Ohio	Jan. 28
Coffee-roaster	Abel Stillman	Poland, N. Y	Dec. 28
Cooking, apparatus for	Joshua Grime	Beekmantown, N. Y	Dec. 28
Cooking-ranges	Herbert H. Stimpson	Boston, Mass	Mar. 14
Cooking, steam-boilers and evaporators.	Dudley Marvin Oran W. Seeley	New York, N. Y Sodus, N. Y	Aug. 28
Cooking-stoves	David H. Hilliard	Cornish, N. H	Nov. 26
Cooking-stoves	James Parmele	Ogden, N. Y	Oct. 14
Cooking-stoves	Jas. Still	Zanesville, Ohio	Sept. 19
Cooking-stoves	Joel Greene	Rochester, N. Y	Dec. 28
Cooking-stoves	Jordan L. Mott	New York, N. Y	Dec. 17
Cooking-stoves	R. G. Cochran	Francistown, N. H	Oct. 10
Cooking-stoves	Samuel L. Chase	Woodstock, Vt	Sept. 25
Cooking-stoves	Samuel W. Cole	Chelsea, Mass	Aug. 25
Cooking-stoves	William Gallup	Norwalk, Ohio	June 10
Cooking-stoves	William Jeanes	Philadelphia, Pa	May 25
Cooking-stoves	William Melsheimer	Philadelphia, Pa	Dec. 19
Cooking-stoves, burning bituminous coal, &c.	William B. Lawrence	Cincinnati, Ohio	Oct. 14
Cooking-stoves, draught, &c., in	Horace Strickland	Bradford, Vt	June 27
Cooking-stoves, elevated ovens of	John P. Williston and Willard A. Arnold.	Northampton, Mass	Aug. 25
Cooking-stoves, arranging flues, and governing the draught in.	Charles Guild	Cincinnati, Ohio	June 20
Cooking-stoves, Franklin, &c., improvement in.	Joel Houghton	Ogden, N. Y	May 12
Cooking-stoves, Franklin	Reuben B. Houghton	Clarkson, N. Y	Aug. 25
Cooking-stoves having elevated ovens	Lester Tilden	Barre, Vt	July 18
Cooking-stove, steam apparatus for	Peter Getz	Lancaster, Pa	Jan. 11
Cooking-stoves with double fire-places	Reuben Jackson	Zanesville, Ohio	Mar. 19
Drums, for heating apartments	William Frazier	Brooklyn, N. Y	April 30
Fire-places, to prevent their smoking	Homer Roberts	Delhi, N. Y	April 30

Classified list of expired patents—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Furnace, bakers'	Gardner Chilson	Boston, Mass	June 10
Furnace, portable, for heating water in bathing tubs.	Randolph Densmore	Hopewell, N. Y	Nov. 26
Heat transmitting, by circulation of hot water. (An improvement in the apparatus patented by him August, 1838.)	Angier M. Perkins	Citizen of U States, now in London, England.	Sept. 4
Heating buildings, apparatus, &c	George M. Dexter	Boston, Mass	Dec. 1
Kitchen-ranges	Ebenezer Barrows	Rochester, Mass	July 18
Lamp, argand, oil-burner, adapted to burn spirits of turpentine.	Charles Carr	Philadelphia, Pa	June 20
Lamp, camphene	Michael B. Dyott	Philadelphia, Pa	Aug. 25
Ovens, portable, combined with stoves	Edward Gosselin	New York, N. Y	Nov. 7
Stoves	Charles R. Wheeler	Boston, Mass	July 18
Stoves	John Scott	Philadelphia, Pa	April 8
Stoves and kettles, for making varnish, &c.	Harmon Hibbard	Attica, N. Y	June 17
Stoves, fire-chambers of, mode of constructing.	Benjamin F. and Job S. Gold	New York, N. Y	July 15
Stoves, for heating the air of apartments	George C. Howe	New York, N. Y	July 10
Warming buildings, by converting hollow walls into flues.	John A. Stewart	Philadelphia, Pa	June 17

CLASS VI.—STEAM AND GAS ENGINES, *including boilers, and furnaces therefor, and parts thereof.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Boilers, steam	Jacob B. Eversole	St. Louis, Mo	Mar. 31
Boilers, steam, connecting and supplying water to the same.	Cadwallader Evans	Pittsburg, Penn	Sept. 3
Boilers of locomotive engines	John Penniman	Baltimore, Md	April 24
Boilers, steam, supplying with water	Benjamin M. Hyatt	Wilmington, Del	Oct. 10
Boilers, steam, preventing explosion of	James Reid	Pawtucket, R. I	May 19
Heat of blast furnaces to steam-boilers, applying the waste.	Martin Bell	Antes, Pa	June 10
Spark arrester	David Matthew	Schenectady, N. Y	Dec. 31
Spark arrester	Leonard Phleger	Philadelphia, Pa	Sept. 10
Spark arrester (improvement in patent, dated September 10, 1840.)	Leonard Phleger	Philadelphia, Pa	Dec. 28
Spark arrester	Randal Fish	New York, N. Y	Oct. 14
Spark extinguishers	David Ritter	New Haven, Conn	Nov. 26
Spark extinguishers	William P. McConnell	Washington, D. C	Dec. 10
Steam engine, arranging the cylinders in double cylinder engines, for preventing a "dead point" on the crank.	Caleb L. Ferris	Courtland, N. Y	July 1
Steam engine, condensing apparatus of	Daniel Treadwell	Cambridge, Mass	Mar. 31
Steam engine, locomotive	Asa Whitney	Rotterdam, N. Y	June 27
Steam engine, locomotive	Matthias W. Baldwin	Philadelphia, Pa	Dec. 31
Steam engines, locomotive, and railroad carriages.	Alfred C. Jones	Philadelphia, Pa	Oct. 10
Steam engine, locomotive, for consuming sparks.	Fras. B. Longmire and H. Jones Brooke.	Philadelphia, Pa	July 10
Steam engine, locomotive, regulating waste steam.	Ross Winans	Baltimore, Md	Nov. 26
Steam engine, packing for pistons, &c	Chas. F. Pike	Providence, R. I	Aug. 12
Steam engine, rotary	Jacob C. Robie	Binghampton, N. Y	Nov. 26
Steam engine, connecting the piston rod with the pistons of steam cylinders.	Matthias W. Baldwin	Philadelphia, Pa	Dec. 17
Steam engine, rotary, Drummond's	James Moore	Elizabethtown, N. J	June 10
Steam engine, rotary, packing	John D. Akin	Columbus, Pa	Mar. 19
Steam power, applying to locomotives, &c	John Ericsson	Kingdom of Sweden	Nov. 5
Valves, cut-off, for steam engines	William A. Lighthall	Albany, N. Y	Nov. 26

Classified list of expired patents—Continued.

CLASS VII.—NAVIGATION AND MARITIME IMPLEMENTS, *comprising all vessels for conveyance on water, their construction, rigging, and propulsion, diving-dresses, life-preservers, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Building and propelling vessels	George Burnham	Philadelphia, Pa	Dec. 10
Constructing canal boats in sections, &c.	Robert Frazer	Waynesburgh, Pa	Sept. 10
Constructing vessels, ships, and boats	George F. Bigelow	Norfolk, Va	Feb. 18
Life-preserver	Henry B. Bourné	New York, N. Y	May 8
Life-preserver	Ralph Bulkley	New York, N. Y	May 8
Life-preserver	Rufus Porter	Billerica, Mass	May 25
Propelling boats, &c., apparatus for	Hugh Ronalds	Albion, Ill	Dec. 14
Propelling boats upon canals, &c., by steam.	Mellen Battel	Albany, N. Y	Oct. 14
Propelling boats, inclined float paddle-wheels for.	Francis W. Stevens	Chigwell, England	Sept. 5
Propelling boats, paddle-wheels for	Matthew W. King	New York, N. Y	Jan. 15
Vessels, stranded, hauling off	Thomas Bell	Bellport, N. Y	Oct. 22

CLASS VIII.—MATHEMATICAL, PHILOSOPHICAL, AND OPTICAL INSTRUMENTS, *including clocks, chronometers, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Alarm, fire	Rufus Porter	Billerica, Mass	Dec. 28
Alarm to clocks and other time-pieces, applying.	Benjamin Knight	Slatersville, R. I	Sept. 10
Alarm, to protect houses against thieves	Lester E. Denison	Saybrook, Conn	Oct. 22
Compass, surveyors'	William C. Poole	Lancaster, Pa	July 31
Electro-magnetic machine	Truman Cook	New York, N. Y	Aug. 25
Lottery schemes, mathematical operation of drawing.	Joseph Vannini	New York, N. Y	July 18
Maps, charts, &c., instruments for delineating.	Amity Bailey	Newberry, S. C	Sept. 4
Watches, duplex escapement in	Chas. Edward Jacot des Combes	Baltimore, Md	April 30

CLASS IX.—CIVIL ENGINEERING AND ARCHITECTURE, *comprising works on rail and common roads, bridges, canals, wharves, docks, rivers, weirs, dams, and other internal improvements, buildings, roofs, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Blinds, Venetian, raising and lowering	John Weir	New York, N. Y	Oct. 8
Blinds, window, opening and closing	George Butterfield	Hopkinton, N. H	Sept. 4
Boring rocks, &c	Simon Pettes	Schenectady, N. Y	July 3
Bridge, floating swing	John N. Vrooman	Danube, N. Y	April 15
Bridge, truss frames for	William Howe	Warren, Mass	July 10
Bridge, truss frames of	William Howe	Warren, Mass	Aug. 3
Canal locks, sluice gates for	George W. Hildreth	Lockport, N. Y	Mar. 19
Dock, dry	Charles F. Johnson	Tioga, N. Y	Mar. 6
Dock, dry	John S. Gilbert	New York, N. Y	May 12
Dock, floating dry	John S. Gilbert	New York, N. Y	Mar. 25
Dock, floating dry	John S. Gilbert	New York, N. Y	Sept. 19
Dock, floating dry	Joseph T. Martin	New York, N. Y	Mar. 19
Dock, floating dry, (improvement in the floating dry dock patented to James H. Peck *et al.*, March 26, 1834.)	William Thomas	St. Louis, Mo	May 19
Doors, hanging	William D. Beasom and E. G. Reed, assignees of George W. Wilson.	Nashua, N. H	July 10

Classified list of expired patents—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Dredging machine	Oliver Allen	Norwich, Conn	May 8
Dredging machine	William Easby	Washington, D. C	Aug. 25
Earth, removing	Jarvis Ring	Ogden, N. Y	July 1
Excavating ditches, canals, &c.	Joseph Hanchett	Cold Water, Mich	Feb. 28
Macadamizing roads, &c., breaking stone for.	Nicholas Cooper, jr Townsend McConnell William E. Lukens	Wheeling t'ns'p, Oh. Wheeling t'ns'p, Oh. Short Creek, Ohio	June 27
Railroad carriages, connecting and disconnecting.	James Stimpson	Baltimore, Md	Dec. 10
Railroad chairs, for sustaining and holding the rails.	William Dripps	Coatesville, Pa.	April 8
Railroad, construction of	James Herron	Baltimore, Md	April 18
Railroad, construction of	William Russell	New York, N. Y	May 8
Railroad, construction of, and mode of applying power to propel carriages thereon. (antedated March 3, 1840.)	John Rangeley	Camberwell, England.	Dec. 28
Railroad, pneumatic, valves for	Samuel Clegg & Jacob Samuda.	England	Dec. 31
Railroad switches	Nathaniel Eaton	Worcester, Mass	Sept. 3
Railroad switches, constructing and shifting.	Jesse La Rue	Bristol, Pa	Nov. 10
Railroad switches, shifting	Richard W. Shekells	Baltimore, Md	Oct. 22
Railroad tracks	Benjamin H. Latrobe	Baltimore, Md	Oct. 8
Railroad tracks, cleaning	William and James Thorn, jr	Plainfield, N. J	Jan. 29
Railroad tracks, cleaning snow from, (antedated January 15, 1840.)	Charles Lombaert	Philadelphia, Pa	Mar. 31
Railroad tracks, cleaning snow from	Joseph H. Moore Benjamin Woodworth	Worcester, Mass. Boston, Mass.	Oct. 31
Railroad tracks, for cars to turn short curves.	Henry M. Naglee	Philadelphia, Pa	Aug. 22
Roofing houses	William Docker	New Orleans, La	Dec. 10
Roofs, metal, supporting	Peter Naylor	New York, N. Y	June 12
Signals, by electro-magnetism	Samuel F. B. Morse	New York, N. Y	June 20
Snags, sawing or cutting	James Hamilton	New York, N. Y	June 27
Stumps, extracting	Eleazer Marble	Wyalusing, Pa	Dec. 14
Stumps, extracting	Frederick A. Stuart	Catharine, N. Y	April 30
Stumps, extracting	John D. Akin	Columbus, Pa	Feb. 26
Stumps, extracting	Lewis and Charles Howard	Reading, N. Y	Sept. 14
Stumps, extracting	Miles C. Mix	Tompkins c'nty, N. Y.	Mar. 31
Surveying, hydrographic, art of	H. Ariel Norris	New York, N. Y	June 27
Telegraph, electro-magnetic, (antedated June 12, 1837.)	Charles Wheatstone and Wm. F. Cooke.	Great Britain	June 10
Weather strip, preventing water from beating under doors of houses, (antedated November 20, 1840.)	Alexander Kirkpatrick	Newark, N. J	Dec. 14
Wells, sinking, in alluvial soils, apparatus for.	Ebenezer Rice	Salina, N. Y	Nov. 26

Class X.—Land conveyance, *comprising carriages, cars, and other vehicles used on roads, and parts thereof.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Axles and boxes for carriage wheels	Asa R. Reynolds	Skaneateles, N. Y	Dec. 5
Axles and shafts, oiling horizontal	Hiram M. Smith	Richmond, Va	April 15
Brakes, friction, for railroad cars, machinery for operating.	John L. Clarke	Nashua, N. H	April 11
Brake, railroad car, to prevent accidents, &c.	Matthew W. King	New York, N. Y	May 8
Brake, railroad carriages	Petrus J. O. Conway	Philadelphia, Pa	Sept. 10
Carriages or cars, railroad, constructing; also, mode of dispensing with switches, &c.	Isaac N. Stanley	Philadelphia, Pa	Mar. 12
Carriages, railroad, &c., coupling irons for.	Thomas G. Owen	Baltimore, Md	July 1
Carriages, railroad, connecting and disconnecting.	James Stimpson	Baltimore, Md	Dec. 10
Carriages, two-wheeled, (antedated August 12, 1840.)	John Page	New York, N. Y	Sept. 14
Carriages, whipple-tree for	Benjamin Fowler, jr. Assignee of Jas. Jorey, *inventor*.	Hartford, Conn. Stafford, Conn	June 17
Sleds for transporting ice in blocks	Nathaniel J. Wyeth	Cambridge, Mass	Dec. 1
Sleigh, metallic runner	Arannah Spear	Braintree, Vt	May 25
Wheels, car, cast iron	Wm. W. Bergstresser	Harrisburg, Pa	Jan. 11
Wheels, car, constructing	Albert Fuller	Providence, R. I	Oct. 14
Wheel hubs, carriage, greasing, &c.	Nathaniel C. Day	Lunenburgh, Mass	July 10
Wheel hubs, carriage, securing the boxes to their axles.	Lyman Smith, jr., and Griffin R. Waring.	Derby, Conn	June 17

Classified list of expired patents—Continued.

CLASS XI.—HYDRAULICS AND PNEUMATICS, *including water-wheels, windmills, and other implements operated on by air or water, or employed in the raising and delivery of fluids.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1849.
Cock, stop	James Robertson	New York, N. Y	May 8
Faucet, molasses gate	Ammi West	Greene, Maine	Aug. 28
Hose, fire, stopping accidental breaches in.	Ralph Bulkley	New York, N. Y	May 8
Hydrants and fire-plugs	S. H. Davies	Cincinnati, Ohio	July 18
Pumps	Joseph Evens	Lebanon, Ohio	May 25
Pumps	Lebbeus Caswell	Harrison, Me	May 19
Raising water, apparatus for producing a vacuum.	Eugene Ablon, assign. of Pierre Ravard, *inventor*.	Paris, France	Dec. 17
Sparger, self-acting, &c	H. Jones Brook and Francis B. Longmire.	Philadelphia, Pa	May 8
Water, supplying to buildings for purpose of extinguishing fires.	Lonson Bush	Erie county, N. Y	Oct. 16
	Adm'r of Isaac Lowell, *inventor*.	Late of Pendleton, N.Y.	
Water-wheel	Edward Robbins, jr., and Wm. Ashby.	Bordentown, N. J	Mar. 25
Water-wheel	Joseph Hanchett	Cold Water, Mich	July 15
Water-wheel, chain bucket	John Dutton, jr	Ashton, Pa	Feb. 26
Water-wheel, percussion and reaction, (improvement on patent of Zebulon & Austin Parker of October 19, 1829.)	Zebulon Parker and Rob't McKelvey, adm'r of A. Parker, joint inventor with Z. Parker.	Ohio	June 27
Water-wheel, reaction	Archibald Bryce	Campbelltown, N. Y	Oct. 16
Water-wheel, tide or current	F. H. Southworth	St. Louis, Mo	Jan. 23
Water-wheel, tub	Abijah Woodward	Athol, Mass	May 8
Windmill, &c	Isaac Garver and Samuel Fahrney.	Boonsboro', Md	Dec. 28

CLASS XII.—LEVER, SCREW, AND OTHER MECHANICAL POWER, *as applied to pressing, weighing, raising, and moving weights.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Balance or scale beam	Seth E. Winslow	Philadelphia, Pa	July 31
Balance, platform	Albert Dole	Bangor, Me	July 18
Balance, platform	Chauncy Grain and Evert S. Wemple.	Madison, N. Y	April 8
Press, cheese	J. A. Fletcher	Irasburg, Vt	June 20
Press, cheese	Rufus Porter	Billerica, Mass	April 15
Press, cotton	Fowler M. Ray	Catskill, N. Y	Aug. 25
Press, cotton, hay, &c	James E. Kelsey	Poughkeepsie, N. Y.	Sept. 25
	James A. Potter	Providence, R. I	

CLASS XIII.—GRINDING-MILLS AND MILL-GEARING, *including grain-mills, mechanical movements and horse-powers, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Apples, &c., grinding	Thos. A. Wells	New York, N. Y	Aug. 25
Bark mill, breaking and grinding	Rich'd Montgomery and Lewis W. Harris.	Sangerfield, N. Y	Aug. 12
Coffee mill, &c., constructing	Laureston R. Livingston and Calvin Adams.	Pittsburg, Pa	Sept. 25
Grain, cleaning, scouring, and conveying; and cooling, bolting, and conveying flour.	Aaron Bull	Caroline, N. Y	Jan. 16
Grist-mill	Edward Gray	Ulysses, N. Y	Mar. 25
Grist-mill, constructing bales and drivers.	Ezra R. Benton	Ohio City, Ohio	Mar. 31
Grist-mill, cylinder	Harvey W. Pitts	Wilsonville, Ala	July 1

Classified list of expired patents—Continued.

Inventions and discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Grist-mill, portable	Isaac Straub	Cincinnati, Ohio	Feb. 18
Horse-power	Chas. Hibbard	Guilford, N. H	Sept. 14
Horse-power	Enoch Piper	Camden, Me	June 10
Horse-power	George Strenge & Jacob Rohrer.	Lancaster, Pa	May 8
Horse-power	Samuel S. Allen	Miamisburg, Ohio	Jan. 10
Horse-power, endless floor	Orestes Badger	Cooperstown, N. Y	Dec. 14
Mill-bush, (antedated June 18, 1840.)	Jacob Aulsbaugh	East Berlin, Pa	July 18
Mill-bush, and keeping same close to the spindle.	Elijah W. Welsh	Paris, Va	Jan. 28
Mill-bush, self-regulating and self-oiling	Samuel Moore	Chambersburg, Pa	April 8
Mill, crushing hard substances	James Rowe	Athens, Ala	April 24
Mill-spindles, oiling and protecting from dirt.	Jesse Hubbard	Watertown, Conn	April 8
Mill-spindle, and trundle-head of mills	Elbridge G. Potter	Lebanon, Ill	July 18
Mill, sugar-grinding	Nathan Sargent	Cambridgeport, Mass	Sept. 10
Mill-stones, dressing	Robert M. Smith	Rutherford Co., Tenn.	Feb. 8
Mill, wing-gudgeons for	David Phillips	Georgetown, Pa	Dec. 28
Power, applying water to propel machinery.	William Baker	Utica, N. Y	May 19

Class XIV.—Lumber, *including machines and tools for preparing and manufacturing, such as sawing, planing, mortising, shingle and stave, carpenters' and coopers' implements.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Auger, screw	William Field	Pawtucket, R. I	April 15
Blocks, forming for wooden pavements	Redwood Fisher, assignee of Augustus Count de Lisle, *inventor.*	Paris, France	July 10
Blocks of wood, sawing paving	Amaziah Nash	Calais, Maine	Nov. 13
Boring and mortising in chair seats, &c	William L. Harley	Chagrin Falls, Ohio	Aug. 14
Boxes, turning wooden	John H. Stevens, assignee of Chauncey E. Warner, *inventor.*	New York, N. Y	Jan. 18
Corks, cutting	Charles R. Macy	Hyde Park, N. Y	Oct. 31
Corks, cutting	Samuel Sawyer	Boston, Mass	June 10
Hewing plough beams, &c	Draper Riggles, Joel Nourse, and John C. Mason, assignees of Elbridge G. Matthews.	Worcester, Mass	Oct. 22
Lathe, chuck for	Simon Fairman	Waterford, N. Y	July 18
Lathe, machinery for turning	John Clark, jr	Mile End, Glasgow, North Britain.	July 30
Mortising and tenoning machine	Andrew Bailey	Jefferson, Ohio	June 20
Pails, buckets, &c., making and affixing the ears and bales.	John F. Phelps	Havana, N. Y	May 12
Pit-sawing and slitting machine for sawing logs, &c.	James Hamilton	New York, N. Y	June 27
Planing machine	James McGregor, jr	Savage Factory, Md	July 15
Sawing and splitting timber	Jno. P. McDowell	Summit, Pa	Aug. 12
Sawing stuff circular	Thos. Kenderdine, jr	Horsam, Pa	Aug. 12
Saw mill dogs	Martin Rich	Ithaca, N. Y	Aug. 28
Saw mill, self-adjusting log brace	Benjamin Cushwa	Clear Spring, Md	July 15
Saw mill, self-tending	Edwin Moody and Sam'l Morrill.	Andover, N. H	Feb. 8
Shingles, cutting	Miles R. Payne	Andersontown, Ia	Oct. 30
Splints, match, cutting	John H. Stevens, assignee of Elisha Fitzgerald.	New York, N. Y	July 18
Splints, match, manufacturing	Norman T. Winans and Thaddeus Hyatt.	New York, N. Y	Nov. 26
Staves, crossing and chiming	Charles F. Beverly	Salem, Ohio	Oct. 16
Staves, cutting	Cephas Manning	Acton, Mass	Sept. 10
Staves, cutting	Isaac Hosmer and Wm. P. L. Badger.	Concord, Mass	Sept. 2
Staves, cutting	Oliver Sheldon	N. Marlborough, Mass.	Sept. 10
Staves, cutting, &c	Cephas Manning	Acton, Mass	Sept. 14
Staves, dressing and jointing	Hervey Law	Wilmington, N. C	July 15
Tenons, cutting round, &c	Mahlon Gregg	Philadelphia, Pa	Dec. 10
Veneers, cutting	John Dresser	Stockbridge, Mass	Sept. 3
Veneers, cutting	Wm. R. Greenleaf and Alonzo Cole.	Gerry, N. Y	Feb. 18
Veneers, straight or curved, laying on	Casper Kittenger	Massilon, Ohio	Mar. 14

Classified list of expired patents—Continued.

CLASS XV.—STONE AND CLAY MANUFACTURES, *including machines for pottery, glass-making, brick-making, dressing and preparing stone, cements, and other building materials.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Brick machines	James Hodge	Fairplay, S. C	Mar. 6
Brick machines	Julius Willerd	Baltimore, Md	Jan. 29
Brick machines	Samuel Talbott	Richmond, Va	April 8
Brick machines, moulding and pressing	Stacy Costill	Philadelphia, Pa	Sept. 4
Flower-pots, or vases for plants, &c	Joseph Adams	Boston, Mass	Sept. 3
Kiln, brick	Henry Read	Kensington, Pa	June 17
Kiln, lime, regulating the draught of	Isaac Richardson	Paoli, Pa	Feb. 21
Stone, sawing-mill for	David V. Rannels	Washington, Ky	Feb. 8

CLASS XVI.—LEATHER, *including tanning and dressing, manufacture of boots, shoes, saddlery, harness, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Boots and shoes, heels of	Samuel Warner	Lowell, Vt	July 1
	Jere. Hodgkin	Westfield, Vt	
	William E. Traver	Watervliet	
Boot forms, bevelling	Elijah Holmes	Stoughton, Mass	Aug. 12
Boot, gaiter, gum elastic gores	John H. Dupont and Theodore Hyatt.	New York, N. Y	Oct. 30
Harness and carriages, safety	Edwin Eastlack	Greenwich, N. J	Jan. 10
Harness, breast-plate for horses	Abel Post	Henrietta, N. Y	April 8
Leather, fair, manufacturing	John L. Turner	Philadelphia, Pa	July 15
Leather, whitening	James C. Booth	Philadelphia, Pa	Dec. 5
Mail bags, &c., mouth-piece	James Sellers and Abraham L. Pennock.	Philadelphia, Pa	June 12
Pricking leather, preparatory to stitching, (antedated September 30, 1840.)	Samuel Sheldon	Cincinnati, Ohio	Oct. 10
Pricking leather, preparatory to stitching, (antedated September 21, 1840.)	Samuel Sheldon	Cincinnati, Ohio	Oct. 10,
Saddles	Owen McClure	Fredonia, N. Y	Mar. 25
Saddle, elastic spring seat	Charles E. King	Mount Pleasant, Ohio	Feb. 21
Soles of pumps, shoes, &c., channelling and scarfing.	Lewis Baker	Fort Plain, N. Y	Sept. 2
Tanning, process of	Abel H. Buzzell	North Bridgewater, Massachusetts.	Aug. 25
Tanning, process of	Daniel Howell, assignee of	New York, N. Y	Dec. 17
	Walter Buchanan	Milford, Pa	
Tanning, process of	Richard T. Downing	Monroe county, Pa	April 30
	George D. Smith	Philadelphia, Pa	
Trunks, rendering them water-proof	Peter Getz	Lancaster, Pa	Nov. 7

Classified list of expired patents—Continued.

CLASS XVII.—HOUSEHOLD FURNITURE, MACHINES, AND IMPLEMENTS FOR DOMESTIC PURPOSES, *including washing-machines, bread and cracker machines, feather-dressing, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Bedsteads	John Hart	Lebanon, Ky	Mar. 3
Bedsteads, constructing and cording the same.	Martin Engel	Easton, Pa	April 24
Bedsteads, cutting screws upon the ends of the rails.	Jacob Lindley	Cynthiana, Ky	Oct. 10
Bedsteads, fastening	William H. Sabin	New Milford, Pa	May 12
Bedsteads, fastening, and attaching and stretching sacking.	Mahlon Gregg	Philadelphia, Pa	Mar. 25
Bedstead, windlass	Thomas Lamb	Washington city, D. C.	Nov. 13
Chairs	Matthew W. King	New York, N. Y	Aug. 25
Chair, rocking	Samuel H. Bean	Philadelphia, Pa	Mar. 31
Cot, or cross bedstead sofa	Gerard Sickels	Middletown, Conn	Sept. 25
Crackers, making	Humphrey Winslow	Swansey, Mass	Dec. 14
Cutting vegetables	George J. Nevell	Rising Sun, Pa	Oct. 14
Dough, breaking or working	John W. Post	Baltimore, Md	Mar. 14
Feathers, cleaning and drying	John Hucks Stevens, assignee of Robert B. Lewis, *inventor*	New York, N. Y. / Hallowell, Me	June 27
Preserving and holding butchers' meat in market places, apparatus for.	Adam Seltzer	Baltimore, Md	Sept. 5
Refrigerators	John Scott	Philadelphia, Pa	July 10
Sofa which can be adapted to invalids	Martin Engel	Easton, Pa	May 12
Washing clothes, machine for	Sewall Benson	Waterville, Me	May 25

CLASS XVIII.—ARTS, POLITE, FINE, AND ORNAMENTAL, *including music, painting, sculpture, engraving, books, paper, printing, binding, jewelry, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Coloring maps, mode of	Lucius Stebbins	Hartford, Conn	Mar. 12
Files for filing papers, screw-nuts to be applied to.	William Mann	Philadelphia, Pa	July 3
Likenesses, taking, by means of concave reflector and plates.	Alexander S. Walcott	New York, N. Y	May 8
Organ, vocal	John W. Campbell	Attica, Ia	Nov. 26
Pencil-case, ever-pointed	Thomas Woodward	Brooklyn, N. Y	June 10
Pencil, ever-pointed	Thomas Woodward	Brooklyn, N. Y	Oct. 14
Pens, steel writing	David Thomas	Hingham, Mass	July 3
Piano-fortes	Jonas Chickering	Boston, Mass	Oct. 8
Printing press	Stephen P. Ruggles	Boston, Mass	Nov. 10
Printing-press, card	Samuel Orcutt	Boston, Mass	Aug. 25
Printing-press, locomotive cylinder	Chas. J. Carr and Andrew Smith	Belpher, England	Sept. 10
Writing on glass, composition for	William Davison	New York, N. Y	May 8

Classified list of expired patents—Continued.

CLASS XIX.—FIRE-ARMS AND IMPLEMENTS OF WAR, *and parts thereof, including the manufacture of shot and gunpowder.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Balls, &c., throwing, &c	Joseph Martin, M. D	Louisville, Ky	Aug. 3
Balls or shot, manufacturing	Levi Magers	Baltimore, Md	Nov. 13
Fire-arms	Silas Day	New York, N. Y	Oct. 8
Guns, pistols, &c	Geo. Stocker and Jos. Bentley	Birmingham, Eng	April 8
Pontoon equipage for military and other operations.	Elisha Mills Huntington, administrator of J. F. Lane, deceased.	Terre Haute, Ind	June 17
Rifles and other fire-arms	James R. Thomas	Collingsworth, Ga	May 19
Rifles, movable loading muzzle for	Alvan Clark	Cambridge, Mass	April 24
Rocket staffs, mode of stiffening	John W. Cochrane	New York, N. Y	April 30

CLASS XX.—SURGICAL AND MEDICAL INSTRUMENTS, *including trusses, dental instruments, bathing apparatus, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Bathing apparatus, (antedated February 8, 1840.)	George J. Bird and Peter Milne.	New York, N. Y	June 17
Baths, portable	J. Wright Warren, jr	Boston, Mass	July 31
Club-foot, apparatus for treatment of	John B. Brown	Boston, Mass	April 30
Teeth, artificial, instrument for adjusting the grinding surfaces of.	James Cameron	Philadelphia, Pa	April 30
Teeth, artificial, manufacture of, (antedated June 18, 1840.)	Daniel Harrington	Philadelphia, Pa	Dec. 10
Teeth, artificial, mode of attaching	Alfred Rigge	New York, N. Y	July 3
Teeth and gums, obtaining casts from, &c	Daniel T. Evens	Philadelphia, Pa	Aug. 28
Trusses for hernia, (antedated August 28, 1839.)	Moore R. Fletcher	Boston, Mass	Feb. 26
Trusses for prolapsus uteri	Goodown Bright	Bellbrook, Ohio	Dec. 17
Trusses, surgeons'	Enoch Thomas	New Athens, Ohio	Mar. 12
Trusses, surgeons'	W. B. Dodson	Louisville, Ky	June 17

CLASS XXI.—WEARING APPAREL, ARTICLES FOR THE TOILET, &C., *including instruments for manufacturing.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Buttons, metallic, making, &c	Festus Hayden	Waterbury, Conn	July 10
Buttons, mode of fastening	Stephen Clapp, assignee of Henry W. Hewet.	New York, N. Y	Dec. 10
Combs, cutting the teeth of	Joseph S. Ives	Bristol, Conn	Oct. 8
Comb-plates, planing and forming	Julius Pratt, Fenner Bush, Aaron Pratt, and Zina K. Murdock.	Meriden, Conn	Oct. 29
	Geo. Read, Alpheus Starkey, Geo. Spencer, and Jno. C. Rodgers.	Saybrook, Conn	
	Assignees of Wm. M. Fowler, *inventor*.	North Brandford, Conn.	
Garments, measuring and draughting	Isaiah J. Hendryx	Troy, N. Y	April 18
Garments, measuring body, draughting, and cutting coats.	Thos. E. Tilden	Baltimore, Md	Dec. 5
Garments, tailors' measure	Richard Dame	Hanover, N. H	May 8
Garments, tailors' measuring instruments	William J. Lemmond	Lancaster, S. C	April 18
Wigs, metallic	François Bourgeret	New York, N. Y	May 8

Classified list of expired patents—Continued.

CLASS XXII.—*Miscellaneous.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1840.
Fire-escapes	Sylvester Penfield	Hartford, Conn	Mar. 3
Fire-escapes	William P. Withey	Hartford, Conn	May 12
Ice, cutting	Nath'l J. Wyeth	Cambridge, Mass	Dec. 1
Ice, machinery for raising blocks of	Nath'l J. Wyeth	Cambridge, Mass	Dec. 1
Ice, machinery for reducing blocks to uniform thickness, &c.	Nath'l J. Wyeth	Cambridge, Mass	Dec. 1
Ice, machinery for raising blocks of, from water, and depositing the same on sleds.	Nath'l J. Wyeth	Cambridge, Mass	Dec. 1
Stencil-plate, or apparatus for marking boxes.	Edwin Allen	Windham, Conn	Sept. 4

CLASSIFIED LIST OF PATENTS FOR DESIGNS THAT HAVE EXPIRED DURING THE YEAR 1854.

Designs.	Patentees.	Residence.	Date of patent.
			1847.
Buttons, ornamental	D. A. Booth	New York, N. Y	July 24
Clock frames	Nathaniel Batchelor	New York, N. Y	July 24
Floor cloth	James Albro, jr.	Elizabethtown, N. J	July 24
Grates, fire-place	Adam Hampton	New York, N. Y	May 15
Grates, fire-place	James L. Jackson, assignee of Henry Biggins.	New York, N. Y	June 5
Grates, fire-place	James L. Jackson	New York, N. Y	May 15
Ovens, frames for	Charles W. Warnich and Frederick Liebrandt.	Philadelphia, Pa	May 8
Spoons	John C. Moore	New York, N. Y	May 29
Spoons, forks, &c	William Gale and Nathaniel Hayden.	New York, N. Y	Sept. 11
Spoons and forks	William Gale and Nathaniel Hayden.	New York, N. Y	Sept. 11
Spoons and forks	Michael Gibney	New York, N. Y	June 19
Spoon-handles, &c	John C. Moore	New York, N. Y	April 3
Stoves	Samuel H. Ransom	Albany, N. Y	Oct. 2
Stoves	Assignee of Thomas Barry	New York, N. Y	Oct. 2
Stoves	George P. Bowers and Joseph Pratt.	Boston, Mass	April 10
Stoves	Asa C. Brownell	Boston, Mass	Aug. 14
Stoves	Gilbert Geer, assignee of John Burges.	Troy, N. Y	July 3
Stoves	Roswell Bush	Rochester, N. Y	Sept. 11
Stoves	James H. Conklin	Peekskill, N. Y	Sept. 11
Stove ornaments	William P. Cresson, assignee of Jacob Beesley and David Stuart.	Philadelphia, Pa	Jan. 13
Stoves	William P. Cresson, assignee of S. H. Sailor, D. Stuart, and J. Beesley.	Philadelphia, Pa	April 17
Stoves	William P. Cresson, assignee of D. Stuart, J. Beesley, and S. A. Watson.	Philadelphia, Pa	April 17
Stoves	Gilbert Geer	Troy, N. Y	May 1
Stoves	Jesse C. Potts, assignee of Samuel W. Gibbs.	Albany, N. Y	Oct. 23
Stoves	Augustus Quackenboss, assignee of Samuel W. Gibbs.	Albany, N. Y	Nov. 27
Stoves	Daniel F. Goodhue and Charles Guild.	Cincinnati, Ohio	Jan. 13
Stove plates	Daniel F. Goodhue and Charles Guild.	Cincinnati, Ohio	Dec. 4
Stoves	James G. Gordon	Schagticoke, N. Y	Oct. 2
Stoves	James Viall and George Warren, assignees of Jeremiah D. Green.	Troy, N. Y	Oct.
Stoves	Charles Guild	Cincinnati, Ohio	Oct. 23
Stoves	Jacob Heermans	Nassau, N. Y	Oct. 2
Stoves	William Hickok	New York, N. Y	Aug. 14; antedat'd Feb. 12, 1847.

Classified list of patents for designs—Continued.

Designs.	Patentees.	Residence.	Date of patent.
			1847.
Stoves, cooking	Peter Low	Troy, N. Y.	May 22
Stoves	John F. Seymour, assignee of Lucius O. Palmer.	Utica, N. Y.	Dec. 18
Stoves	Elijah P. Penniman	Rochester, N Y.	April 17
Stoves, cooking	Cheney, Hunter, & Rowe, assignees of Elijah P. Penniman.	Rochester, N. Y.	Feb. 10
Stoves	Samuel H. Ransom Assignee of Thomas Barry	Albany, N. Y. New York, N. Y.	Jan. 5
Stoves	Samuel H. Ransom Assignee of Thomas Barry	Albany, N. Y. New York, N. Y.	Jan. 5
Stoves	Samuel H. Ransom, assignee of A. Whitney.	Albany, N. Y.	Jan 5; antedat'd July 5, 1846.
Stoves	Samuel H. Ransom	Albany, N. Y.	Jan. 5
Stoves	Samuel H. Ransom	Albany, N. Y.	Aug. 7
Stoves	John F. Rathbone	Albany, N. Y.	Mar. 20
Stoves	John F. Rathbone	Albany, N. Y.	Aug. 7
Stoves	John F. Rathbone	Albany, N. Y.	Oct. 23
Stoves	William Reesor	Cincinnati, Ohio	July 17
Stoves	Johnson & Cox, assignees of Ezra Ripley.	Troy, N. Y.	Feb. 27
Stoves, parlor	Johnson & Cox, assignees of Ezra Ripley.	Troy, N. Y.	July 3
Stoves, parlor	Johnson & Cox, assignees of Ezra Ripley.	Troy, N. Y.	July 3
Stoves	Johnson & Cox, assignees of Ezra Ripley.	Troy, N. Y.	Sept. 11
Stoves	Rowland A. Robbins	Baltimore, Md.	Aug. 7
Stoves	Charles J. Shepard	New York, N. Y.	Aug. 28
Stoves	John F. Rathbone, assignee of Peter J. Simmons.	Troy, N. Y.	Mar. 20
Stoves	George W. & Henry Sizer	Springfield, Mass	Sept. 14
Stoves, parlor	Elihu Smith	Troy, N. Y.	June 12
Stoves, air-tight	Samuel D. Vose	Albany, N. Y.	June 26
Stoves	James Wager	Troy, N. Y.	June 26
Stoves	Allen S. Wallace and James S. Lithgow.	Louisville, Ky.	June 12
Stoves	Charles Wolff	Cincinnati, Ohio	Jan. 21
Stoves	Charles J. Woolson	Cleveland, Ohio	July 17
Stoves	Charles J. Woolson	Cleveland, Ohio	July 17
Woolens, printing on	George W. Wight	New York, N. Y.	Sept. 11

ALPHABETICAL LIST OF PERSONS WHOSE PATENTS HAVE EXPIRED DURING THE YEAR 1854, WITH THEIR INVENTIONS OR DISCOVERIES, AND CLASS.

No.	Patentees.	Inventions or discoveries.	Class.
1903	Ablon, Eugene, assignee of Pierre Ravard, *inventor*.	Raising water, apparatus for producing a vacuum	XI.
1712	Adams, Amos	Smut-machine	I.
1761	Adams, Joseph	Flower pots, or vases for plants, &c	XV.
	Adams, Calvin. (See L. R. Livingston.)		
1519	Akin, John D	Steam-engine, rotary, packing	VI.
1500	Akin, John D	Stumps, extracting	IX.
1767	Allen, Edwin	Stencil-plate, or apparatus for marking boxes	XVII.
1591	Allen, Oliver	Dredging-machine	IX.
1486	Allen, Samuel S	Horse power	XIII.
1473	Allen, Samuel S	Hulling, husking, and shelling corn	I.
1663	Allyn, Edwin, and Clifton B. Hildreth	Cordage, clothes line, stretching and preserving	III.
1709	Ames, John	Paper; making, ruling, and cutting, at one operation	III.
1894	Andrews, James, and Enoch Piper	Hulling oats, barley, &c	I.
1882	Andrews, Solomon	Padlocks for mail-bags, &c	II.
	Angell, William G. (See John Thorpe.)		
	Arnold, Willard A. (See John P. Williston.)		
	Ashby, Wm. (See Edward Robbins, jr.)		
1701	Aulabaugh, Jacob	Mill-bush	XIII.
1577	Bachelder, Lorenzo and Samuel H	Seeding, seed planters	I.
1898	Badger, Orestes	Horse power, endless floor	XIII.
	Badger, Wm. P. L. (See Isaac Hosmer.)		
1770	Bailey, Amity	Maps, charts, &c., instruments for	VIII.
1649	Bailey, Andrew	Mortising and tenoning machine	XIV.
1752	Baker, Lewis	Soles of pumps, shoes, &c., channelling and scarfing	XVI.

Alphabetical list of expired patents—Continued.

No.	Patentees.	Inventions or discoveries.	Class.
1614	Baker, William	Power, applying water, to propel machinery	XIII.
1485	Baldwin, James	Loom, shuttles for weaving cloth	III.
1904	Baldwin, Matthias W	Steam-engine, connecting the piston-rod with pistons of steam cylinders.	VI.
1921	Baldwin, Matthias W	Steam-engine, locomotive	VI.
1779	Barnes, Noah	Cultivators	I.
1845	Barrett, Jonathan F	Winnowing, separating garlic from wheat	I.
1694	Barrows, Ebenezer	Kitchen-ranges	V.
1668	Barton, Gardner, jr	Spring, door, for closing doors, &c	II.
1820	Battel, Mellen	Propelling boats upon canals, &c., by steam	VII.
1531	Bean, Samuel H	Chair, rocking	XVII.
1678	Beasom, William D., and E G. Reed, assignees of George W. Wilson.	Doors, hanging	IX.
1630	Bell, Martin	Heat of blast furnaces to steam-boilers, applying the waste.	VI.
1832	Bell, Thomas	Vessels stranded, hauling off	VII.
1468	Benson, Benjamin	Cocooneries, removing filth from hurdles	III.
1616	Benson, Sewall	Washing clothes, machine for	XVII.
	Bentley, Joseph. (See George Stocker.)		
1533	Benton, Ezra R	Grist-mill, constructing bales and drivers	XIII.
1470	Bergstresser, William W	Wheels, car, cast-iron	X.
1829	Beverly, Charles F	Staves, crossing and chiming	XIV.
1561	Bigelow, Erastus B	Loom, power, weaving figured counterpanes, &c	III.
1492	Bigelow, George F	Constructing ships, vessels, &c	VII.
1704	Blake, Philos, Eli W., and John A	Latch, thumb	II.
1881	Booth, James C	Leather, whitening	XVI.
1507	Bosworth, Benjamin M	Latch, door	II.
1585	Bourgeret, Francois	Wigs, metallic	XXI.
1596	Bourne, Henry B	Life-preserver	VII.
1794	Bradfield, Edward	Smut-machine, cleaning grain, &c	I.
1907	Bright, Goodown	Trusses, for prolapsus uteri	XX.
1597	Brooke, H. J., and Francis B. Longmire.	Sparger, self-acting, &c	XI.
	Brooke, H. Jones. (See F. B. Longmire.)		
1572	Brown, John B	Club-foot, apparatus for treatment of	XX.
1587	Bryant, William	Plough	I.
1831	Bryce, Archibald	Water-wheel, reaction	XI.
	Buchanan, Walter. (See Dan'l Howell.)		
1598	Bulkley, Ralph	Hose, fire, stopping accidental breaches	XI.
1595	Bulkley, Ralph	Life preserver	VII.
1474	Bull, Aaron	Grain, cleaning, scouring, and conveying, &c	XIII.
1765	Bump, Jacob	Cement for covering buildings	IV.
1735	Burch, John	Smut machine	I.
1890	Burden, Henry	Puddle-balls, &c., rolling, in manufacture of iron	II.
1757	Burden, Henry	Spikes, hook or brad-headed	II.
1893	Burnham, George	Building and propelling vessels	VII.
	Bush, Fenner. (See Julius Pratt, F. Bush, and others.)		
1489	Bush, Lonson, administrator of Isaac Lowell, *inventor*.	Water, supplying to buildings for extinguishing fires	XI.
1766	Butterfield, George	Blinds, window, opening and closing	IX.
1741	Buzzell, Abel H	Tanning, process of	XVI.
1636	Byrd, Geo. J., and Peter Milne	Bathing apparatus	XX.
1574	Cameron, James	Teeth, artificial, instruments for adjusting the grinding surfaces of.	XX.
1859	Campbell, John W	Organ, vocal	XVIII.
1644	Carr, Charles	Lamp, argand oil burner, adapted to burn spirits of turpentine.	V.
1775	Carr, Chas. J., and Andrew Smith	Printing presses, locomotive cylinder	XVIII.
1717	Carver, Eleazer	Saws, circular, cutting teeth of	II.
1718	Carver, Eleazer	Saws, filing and mortising teeth of	II.
1610	Caswell, Lebbeus	Pumps	XI.
1785	Chaplin, William	Hats, bonnets, &c., straw, pressing and finishing	III.
1799	Chase, Samuel L	Cooking stoves	V.
1802	Chickering, Jonas	Piano forte	XVIII.
1627	Chilson, Gardner	Furnace bakers	V.
1528	Church, William	Candlestick, improvement in	V.
1490	Church, William	Clasps and buckles	II.
1659	Clapp, Hawley D., assignee of Henry W. Hewet, *inventor*.	Wrench, screw	II.
1889	Clapp, Stephen, assignee of Henry W. Hewet, *inventor*.	Buttons, mode of fastening	XXI.
1565	Clark, Alvan	Rifles, movable loading muzzle	XIX.
1705	Clark, John, jr	Lathe, machinery for turning	XIV.
1548	Clarke, John L	Brakes, friction, for railroad cars, machinery for operating.	X.
1922	Clegg, Samuel, and Jacob Samuda	Railroad, pneumatic, valves for	IX.
1581	Cochran, John W	Rocket staffs, mode of stiffening	XIX.
1814	Cochran, R. G	Cooking stoves	V.
	Cole, Alonzo. (See Wm. R Greenleaf.)		
1730	Cole, Samuel W	Cooking stoves	V.
1729	Cole, Samuel W	Seeding, planting corn, &c	I.
1777	Conway, Petrus J. O	Brake, railroad carriage	X.
1735	Cook, Truman	Electro-magnetic machine, &c	VIII.

Alphabetical list of expired patents—Continued.

No.	Patentees.	Inventions or discoveries.	Class.
	Cooke, Wm F. (See Chas. Wheatstone.)		
1660	Cooper, Nicholas, jr., Townsend McConnell, and William E. Lukens.	Macadamizing roads, &c., breaking stone for	IX.
1733	Cooper, Thomas	Furnaces, puddling, for manufacturing iron with anthracite coal.	II.
1547	Copeland, Asa	Gin, cotton, constructing and affixing ribs to	III.
	Corbaux, Fanny. (See Fras. G. Spilsbury.)		
1804	Cory, Horace	Lead, white, manufacture of	IV.
1769	Costill, Stacy	Brick machines, moulding and pressing	XV.
1546	Crain, Chauncey, and Evert L. Wemple.	Balance, platform	XII.
1864	Criswell, John	Thrashing machine, removing straw and separating grain in.	I.
1471	Crosby, Charles C. P	Salt kettles, constructing and setting	IV.
1479	Crosby, George H	Chimeys, draught of	V.
1648	Crowell, Allen, and William A	Churn	I.
1891	Cummings, James	Thrashing machine	I.
1891	Cushwa, Benjamin	Saw-mill, self-adjusting log-brace	XIV.
1584	Dame, Richard	Garments, tailors' measure	XXI.
1813	Daniels, Reuben	Cloth, &c., machine for reducing worn out, to fibrous state.	III.
1809	Daniels, Reuben	Cloth of various kinds, manufacturing	III.
1702	Davies, S. H	Hydrants and fire plugs	XI.
1495	Davis, Samuel	Punching sheet-iron for stove-pipes, &c	II.
1588	Davison, William	Writing on glass, composition for	XVIII.
1580	Day, Moses	Hemp, &c., preparing and spinning	III.
1680	Day, Nathaniel C	Wheel-hubs, carriage, greasing, &c	X.
1810	Day, Silas	Fire-arms	XIX.
	De Lisle, Augustus Count. (See Redwood Fisher.)		
1835	Denison, Lester E	Alarm to protect houses against thieves	VIII.
1866	Densmore, Randolph	Furnace, portable, for heating water in bathing-tubs.	V.
1570	Des Combes, Charles Edward Jacot	Watches, duplex escapement in	VIII.
1675	Dexter, George M	Heating buildings, apparatus, &c.	V.
1760	Dickinson, William	Paper-engine	III.
1887	D cker, William	Roofing houses	IX.
	Dodge, Jonathan. (See Geo. D. Strong.)		
1841	Dodson, W. B	Trusses, surgeons'	XX.
1529	Doe, Joseph Bolton	Soap frames	IV.
1899	Dole, Albert	Balance platform	XII.
1576	Downing, Richard T., and Geo. D. Smith	Tanning, process of	XVI.
1784	Draper, Francis	Knobs, glass, for doors, &c	II.
1838	Draper, George	Loom, temple, rotary	III.
1758	Dresser, John	Veneers, cutting	XIV.
1542	Dripps, William	Railroad, chairs for sustaining and holding the rails.	IX.
1841	Dupont, John H., and Theodore Hyatt	Boot, gaiter, gum elastic gores	XVI.
1499	Dutton, John, jr	Water-wheel, chain bucket	XI.
1742	Dyott, Michael B	Lamp, camphine	V.
1727	Easby, William	Dredging machine	IX.
1467	Eastlack, Edwin	Harness, and carriages, safety	XVI.
1759	Eaton, Nathaniel	Railroad switches	IX.
1564	Edes, Oliver, and Andrew Holmes	Rivets, machinery for making	II.
1722	Edwards, David	Locks, alarm, for doors, &c	II.
1562	Engel, Martin	Bedsteads, constructing and cording	XVII.
1555	Engel, Martin	Bee-hive	I.
1894	Engel, Martin	Sofa, which can be adapted to invalids	XVII.
1847	Ericsson, John	Steam power, applying to locomotives, &c	VI.
1762	Evans, Cadwallader	Boilers, steam, connecting, and supplying water to the same.	VI.
1743	Evens, Daniel T	Teeth and gums, obtaining casts from	XX.
1615	Evens, Joseph	Pumps	XI.
1536	Eversole, Jacob B	Boilers, steam	VI.
	Fahrney, Samuel. (See Isaac Garver.)		
1892	Fairman, Simon	Lathe, chuck for	XIV.
1755	Farrar, John	Stove-pipes, moulding and making	II.
	Felts, Nicholas. (See Levin Miner.)		
1867	Ferris, Caleb L	Steam-engine, arranging the cylinders in double-cylinder engines for preventing a "dead point" on the crank.	VI.
1553	Field, William	Auger, screw	XIV.
1882	Fish, Randal	Spark-arrester	VI.
1683	Fisher, Redwood, assignee of A. Count de Lisle, *inventor*.	Blocks, forming for wooden pavements	XIV.
1586	Fitzgerald, Daniel, Jesse, and Elisha	Braiding manilla and other fibrous substances	III.
	Fitzgerald, Elisha. (See John H. Stevens.)		
1689	Fletcher, J. A	Press, cheese	XII.
1501	Fletcher, Moore R	Trusses for hernia	XX.
1736	Fobes, Alpheus, and Fitch W. Taylor, assignees under Chas. Lyon, *inventor*.	Rivets, making	II.
1642	Fowler, Benj., jr., assignee of James Jorey, *inventor*.	Carriages, whipple-tree for	X.

Alphabetical list of expired patents—Continued.

No.	Patentees.	Inventions or discoveries.	Class.
	Fowler, William M. (See Julius Pratt, F. Bush, and others.)		
1776	Frazer, Robert	Constructing canal boats in sections, &c	VII.
1571	Frazier, William	Drums, for heating apartments	V.
1824	Fuller, Albert	Wheels, car, constructing	X.
1815	Gail, Titus D	Butter, working and pressing	I.
1624	Gallup, William	Cooking-stoves	V.
1656	Ganet, Daniel	Gas, purifying, for illumination	IV.
1744	Gardner, Smith	Lead, white, manufacture of	IV.
	Gardner, Smith. (See Alpheus Fobes and F. W. Taylor.)		
1914	Garver, Isaac, and Samuel Fahrney	Wind-mill, &c	XI.
1469	Getz, Peter	Cooking-stove, steam apparatus for	V.
1849	Getz, Peter	Trunks, rendering them water-proof	XVI.
1731	Gibbons, Joseph	Seeding, seed planters	I.
1524	Gilbert, John S	Dock, dry	IX.
1606	Gilbert, John S	Dock, floating dry	IX.
1742	Gilbert, John S	Dock, floating dry	IX.
	Gillett, Phineas. (See Geo. C. Kellogg.)		
1567	Gladwin, Porter A	Corn-sheller	I.
1632	Gochnour, Daniel, jr	Plough, hill-side	I.
1689	Gold, Benjamin F. and Job S	Stoves, fire-chambers of, mode of constructing	V.
1805	Gordon, James W. W	Solutions, decoctions, &c., evaporating, &c	IV.
1503	Gorham, Chester	Hats, palm-leaf, pressing	III.
1848	Gosselin, Edward	Ovens, portable, combined with stoves	V.
1523	Gray, Edward	Grist mill	XIII.
1913	Green, Joel	Cooking-stoves	V.
1493	Greenleaf, Wm. R., and Alonzo Cole	Veneers, cutting	XIV.
1526	Gregg, Mahlon	Bedsteads, fastening, and attaching and stretching sacking.	XVII.
1895	Gregg, Mahlon	Tenons, cutting round, &c	XIV.
1918	Grime, Joshua	Cooking, apparatus for	V.
1803	Grimes, William C	Hulling rice, machinery for	I.
1763	Grimes, William C	Winnowing, separating garlic from grain	I.
1745	Groat, Warner	Hulling rice, &c	I.
1573	Groff, Israel W	Straw-cutting, feeding and pressing the straw	I.
1646	Guild, Charles	Cooking-stoves, arranging flues and governing the draught in.	V.
1652	Hamilton, James	Pit-sawing and slitting machine, for sawing logs, &c.	XIV.
1663	Hamilton, James	Snags, sawing or cutting	IX.
1502	Hanchett, Joseph	Excavating ditches, canals, &c	IX.
1686	Hanchett, Joseph	Water-wheel	XI.
1736	Harding, Francis	Hair, curled, carding and picking	III
1723	Harley, William L	Boring and mortising in chairs, &c	XIV.
1884	Harrington, Daniel	Teeth, artificial, manufacture of	XX.
1764	Harris, John W	Oil, lamp, ascertaining quality of	IV.
	Harris, Lewis W. (See Richard Montgomery.)		
1504	Hart, John	Bedsteads	XVII.
1682	Hayden, Festus	Buttons, metallic, &c	XXI.
1557	Hendryx, Isaiah J	Garments, measuring and draughting	XXI.
1871	Heritage, George	Silk, machine for skeining	III.
1910	Heritage, George	Silk, reeling from the cocoons	III.
1909	Heritage, George	Spinning silk, &c., from cocoons	III.
1558	Herron, James	Railroad, construction of	IX.
	Hewet, Henry W. (See H. D. Clapp.)		
	Hewet, Henry W. (See S Clapp.)		
1788	Hibbard, Charles	Horse-power	XIII.
1637	Hibbard, Harmon	Stoves and kettles for making varnish, &c	V.
1654	Hicks, Lucien E	Dies, for making door and other knobs of plate-metal	II.
	Hildreth, Clifton B. (See Edwin Allyn.)		
1517	Hildreth, George W	Canal locks, sluice-gates for	IX.
1858	Hilliard, David H	Cooking-stoves	V.
1772	Hinds, Jacob	Mowing, cutting grass under water	I.
1509	Hodge, James	Brick machine	XV.
	Hodgkin, Jere. (See Samuel Warner.)		
	Holmes, Andrew. (See Oliver Edes.)		
1716	Holmes, Elijah	Boot-forms, bevelling	XVI.
1593	Homer, Charles S	Hoes, garden	I.
1754	Hosmer, Isaac, and Wm. P. L. Badger	Staves, cutting	XIV.
1508	Hotchkiss, Lewis and Willis	Latch, knob, for doors	II.
1601	Houghton, Joel	Cooking stoves, Franklin, &c., improvement in	V.
1734	Houghton, Reuben B	Cooking-stoves, Franklin	V.
1791	Howard, Lewis and Charles	Stumps, extracting	IX.
1677	Howe, George C	Stoves for heating the air of apartments	V.
1685	Howe, William	Bridge, truss-frames for	IX.
1711	Howe, William	Bridge, truss-frames for	IX.
1906	Howell, Daniel (assignee of Walter Buchanan.)	Tanning, process of	XVI.
1538	Hubbard, Jesse	Mill-spindles, oiling and protecting from dirt	XIII.
	Hunt, Walter. (See George D. Strong and Jonathan Dodge.)		

Alphabetical list of expired patents—Continued.

No.	Patentees.	Inventions or discoveries.	Class.
1634	Huntington, Elisha Mills, (administrator of J. F. Lane, deceased.)	Pontoon equipage for military and other operations.	XIX.
1834	Hutchinson, Benjamin	Knitting stockings, machine for	III.
1619	Hyatt, Benjamin M	Boilers, steam, supplying with water	VI.
	Hyatt, Thaddeus. (See Norman T. Williams.)		
	Hyatt, Theodore. (See John H. Dupont.)		
1611	Ives, Joseph S	Combs, cutting teeth of	XXI.
1580	Jackson, Reuben	Cooking-stoves with double fire-places	V.
1621	Jeanes, William	Cooking-stoves	V.
1506	Johnson, Charles F	Dock, dry	IX.
1812	Jones, Alfred C	Steam engine, locomotive, and railroad carriages	VI.
	Jorey, James. (See Benj. Fowler, jr.)		
1888	Judd, Oliver	Latch, door	II.
1730	Kane, Stephen, and Thomas and James Keane.	Wrench, screw	II.
1575	Kellogg, Geo. C., and Phineas Gillett	Wool, cotton, &c., picking and opening	III.
1798	Kelsey, James E., and James A. Potter.	Press, cotton, hay, &c	XII.
1719	Kenderdine, Thomas, jr	Sawing circular stuff	XIV.
1494	King, Charles E	Saddle, elastic, spring-seat	XVI.
1587	King, Matthew W	Brake, railroad car, to prevent accidents, &c	X.
1737	King, Matthew W	Chairs	XVII.
1473	King, Matthew W	Propelling boats, paddle-wheels for	VII.
1844	Kirkman, John	Tallow, preparing for manufacture of candles	IV.
1901	Kirkpatrick, Alexander	Weather strip, for preventing water from beating under doors.	IX.
1514	Kittenger, Casper	Veneers, straight or curved, laying on	XIV.
1664	Knapp, Lewis	Paint, galvanic, protecting iron from rust	IV.
1780	Knight, Benjamin	Alarm to clocks and other time-pieces, applying	VIII.
1543	Knodle, Jonathan	Plough, combined	I.
1645	Lamb, Seth	Mowing-machine	I.
1856	Lamb, Thos	Bedsteads, windlass	XVII.
	Lane, J. F. (See E. Mills Huntington.)		
1797	Lapham, Daniel P., administrator of Benjamin Lapham, deceased.	Spinning, self-acting mule for	III.
1852	La Rue, Jesse	Railroad switches, constructing and shifting	IX.
1808	Latrobe, Benjamin H	Railroad tracks	IX.
1687	Law, Hervey	Staves, dressing and jointing	XIV.
	Lawton, Geo. W. (See Baxter D. Whitney.)		
1891	Lawrence, Wm. B	Cooking-stoves, burning bituminous coal, &c	V.
1556	Lemmond, Wm. J.	Garments, tailors' measuring instruments	XXI.
	Lewis, Robert B. (See Jno. Hucks Stevens.)		
1657	Lewis, Thos. J. & Geo. F	Seeding, seed-planters	I.
1661	Lewis, Thos J. & Geo. F	Seeding, seed-planters	I.
1870	Lighthall, William A	Valves, cut off, for steam-engines	VI.
1590	Lincoln, Jesse	Thrashing machine, shaking the screen in	I.
1816	Lindly, Jacob	Bedsteads, cutting screws upon the ends of the rails.	XVII.
1795	Livingston, Lawreston R., and Calvin Adams.	Coffee-mill, &c., constructing	XIII.
1592	Lomax, Abel & Asahel	Winnowing-machines	I.
1530	Lombaert, Charles	Railroad tracks, cleaning snow from	IX.
1681	Longmire, Fras. B., & H. Jones Brooke.	Steam-engine, locomotive for consuming sparks	VI.
	Longmire, Fras. B. (See H. Jones Brooke)		
	Lowell, Isaac. (See Lonson Bush.)		
	Lukens, Wm. E. (See Nicholas Cooper, jr.)		
	Lyon, Chas. (See Alpheus Fobes, and F. W. Taylor.)		
1842	Macy, Chas. R	Corks, cutting	XIV.
1855	Magers, Levi	Balls or shot, manufacturing	XIX.
1673	Mann, William	Files, for filing papers, screw-nuts to be applied to	XVIII.
1781	Manning, Cephas	Staves, cutting	XIV.
1787	Manning, Cephas	Staves, cutting, &c	XIV.
1900	Marble, Eleazer	Stumps, extracting	IX.
1713	Martin, Joseph, M. D	Balls, &c., throwing, &c	XIX.
1518	Martin, Joseph T	Dock, floating dry	IX.
1612	Martin, Robert	Bee-hive	I.
1746	Marvin, Dudley, and Oran W. Seeley	Cooking, steam-boilers and evaporators	V.
	Mason, Jno. C. (See Draper Ruggles)		
1801	Mason, William	Spinning, self-acting mule for	III.
1930	Matthew, David	Spark-arrester	VI.
	Matthews, Elbridge G. (See Draper Ruggles, and others.)		
1675	McCarthy, Fones	Gin, cotton	III.
1521	McCluer, Orren	Saddles	XVI.
	McConnel, Towns'd, & W. E. Lukens. (See Nicholas Cooper, jr.)		
1892	McConnell, Wm. P	Spark-extinguishers	VI.
1497	McCrone, John	Nails and spikes, wrought	II.

Alphabetical list of expired patents—Continued.

No.	Patentees.	Inventions or discoveries.	Class.
1721	McDowell, John P	Sawing and splitting timber	XIV.
1600	McGregor, James	Hulling-machines	I.
1690	McGregor, James, jr	Planing-machine	XIV.
	McKelvey, Robt. (See Zebulon Parker.)		
1911	Melsheimer, William	Cooking-stoves	V.
1749	Miller, Chas. F	Composition for rendering leather water-proof	IV.
	Milne, Peter. (See George J. Byrd.)		
1696	Miner, Levin, and Nicholas Felts	Seeding, sowing cotton seed	I.
1537	Mix, Miles C	Stumps, extracting	IX.
1714	Montgomery, Richard, and Lewis W. Harris.	Bark-mill, breaking and grinding	XIII.
1747	Montgomery, William	Hemp, machinery for tarring slivers or bands of, and making oakum.	III.
1486	Moody, Edwin, and Samuel Morrill	Saw-mill, self tending	XIV.
1628	Moore, James	Steam-engine, rotary, Drummond's	VI.
1843	Moore, Jos. H., and Benj. Woodworth	Railroad tracks, cleaning snow from	IX.
1541	Moore, Samuel	Mill-bush, self-regulating and self-oiling	XIII.
	Morrill, Samuel. (See Edwin Moody.)		
1617	Morse, Samuel F. B	Signals by electro-magnetism	IX.
1873	Mott, Jordan L	Caldron and furnace combined	V.
1872	Mott, Jordan L	Catches, oblique, &c., forming on plates, &c., of cast-iron.	II.
1905	Mott, Jordan L	Cooking-stove	V.
	Mulliken, Benj., jr. (See W. W. Smith.)		
1635	Murdock, Richard	Hats, bonnets, &c., ironing and pressing	III.
	Murdock, Zina K	Comb plates, planing and forming	XXI.
1796	Naglee, Henry M	Railroad tracks for cars to turn short curves	IX.
1857	Nash, Amaziah	Blocks of wood, sawing paving	XIV.
1631	Naylor, Peter	Roofs, metal, supporting	IX.
1895	Nevell, George J	Cutting vegetables	XVII.
1846	Newhall, Daniel	Trees, protecting, from the canker-worm	I.
1830	Nichols, Martin	Seeding, planting machine	I.
1662	Norris, H. Ariel	Surveying, hydrographic art of	IX.
	Nourse, Joel. (See Draper Ruggles.)		
1532	Olcott, Sands	Flax and hemp, preparing, &c	III.
1550	Olcott, Sands	Flax and hemp, reducing the fibres of	III.
1549	Olcott, Sands	Yarn, washing and cleaning	III.
1732	Orcutt, Samuel	Printing press, card	XVIII.
1697	Osborn, Jacob	Alkali, extracting from ashes in manufacture of potass.	IV.
1666	Owen, Thomas G	Carriage, railroad, &c, coupling irons for	X.
1617	Page, George	Seeding, seed-planting machine	I.
1769	Page, John	Carriages, two-wheeled	X.
	Parker, Austin. (See Zebulon Parker.)		
1658	Parker, Zebulon, and Robt. McKelvey, administrator of A. Parker, joint inventor with Z. Parker.	Water-wheel, percussion and reaction	XI.
1827	Parmele, James	Cooking-stoves	V.
1840	Payne, Miles R	Shingle-cutting	XIV.
1505	Penfield, Sylvester	Fire-escapes	XXII.
1568	Penniman, John	Boilers of locomotive engines	VI.
	Pennock, Abraham L. (See Jas. Sellers.)		
	Penpock, Abraham L. (See Jas. Sellers.)		
1768	Perkins, Angier M	Heat, transmitting, by circulation of hot water	V.
1679	Perkins, Edward L	Paper, card, making	III.
1672	Pettes, Simon	Boring rocks, &c	IX.
1605	Phelps, John F	Pails, buckets, &c., making and affixing the ears and bales.	XIV.
1917	Philips, David	Mill, wing-gudgeons for	XIII.
1748	Phillips, Wm. H	Furnaces, smelting, heating the blast of	II.
1778	Phleger, Leonard	Spark-arrester	VI.
1912	Phleger, Leonard	Spark-arrester	VI.
1898	Pickard, Daniel L	Boilers for heating water, &c	V.
1715	Pike, Charles F	Steam-engine, packing for pistons, &c	VI.
1629	Piper, Enoch	Horse-power	XIII.
	Piper, Enoch. (See James Andrews.)		
1670	Pitts, Harvey W	Grist-mill, cylinder	XIII.
1707	Poole, William C	Compass, surveyor's	VIII.
1915	Porter, Rufus	Alarm, fire	VIII.
1619	Porter, Rufus	Life-preserver	VII.
1554	Porter, Rufus	Press, cheese	XII.
1545	Post, Abel	Harness, breast plate for horses	XVI.
1516	Post, John W	Dough, breaking or working	XVII.
1703	Potter, Elbridge G	Mill-spindle and trundle-head of mills	XIII.
	Potter, James A. (See Jas. E. Kelsey.)		
1877	Pratt, Julius, Fenner Bush, Aaron Pratt, Zina K. Murdock, Geo. Read, Alpheus Starkey, George Spencer, and John C. Rodgers, assignees of William M. Fowler, *inventor*.	Comb-plates, planing and forming	XXI.
	Pratt, Aaron. (See Julius Pratt.)		
1773	Pratzman, August	Locks, door, and other	II

Alphabetical list of expired patents—Continued.

No.	Patentees.	Inventions or discoveries.	Class.
1916	Rangely, John	Railroad, construction of, and mode of applying power to propel carriages thereon.	IX.
1487	Rannells, David V.	Stone, sawing mill for	XV.
	Ravard, Pierre. (See Eugene Ablon.)		
1738	Ray, Fowler M	Press, cotton	XII.
1638	Read, Henry	Kiln, brick	XV.
	Read, George. (See Julius Pratt.)		
	Reed, E. G. (See William D. Beasom.)		
1607	Reid, James	Steam-boilers, preventing explosion in	VI.
1883	Reynolds, Asa R	Axles and boxes for carriage-wheels	X.
1669	Rice, Ebenezer	Wells, sinking in alluvial soils, apparatus for	IX.
1751	Rich, Martin	Saw-mill dogs	XIV.
1496	Richardson, Isaac	Kiln, lime, regulating draught of	XV.
1674	Riggs, Alfred	Teeth, artificial, mode of attaching	XX.
1669	Ring, Jarvis	Earth, removing	IX.
1861	Ritter, David	Spark extinguishers	VI.
1525	Robbins, Edward, jr., and Wm. Ashby	Water-wheel	XI.
1578	Roberts, Homer	Fire-places, to prevent their smoking	V.
1583	Robertson, James	Cock-stop	XI.
1862	Robie, Jacob C	Steam-engine, rotary	VI.
1696	Robinson, George W., and Ezra B	Spring-bolt for door and other locks	II.
	Rodgers, John C. (See Julius Pratt.)		
1796	Rodgers, Peter	Locks for doors	II.
	Rohrer, Jacob. (See George Strenge.)		
1899	Ronalds, Hugh	Propelling boats, &c., apparatus for	VII.
1560	Rowe, James	Mill, crushing hard substances	XIII.
1836	Ruggles, Draper, Joel Nourse, and John C. Mason, assignees of E. G. Matthews.	Hewing plough-beams	XIV.
1851	Ruggles, Stephen P	Printing-press	XVIII.
1569	Russell, Jacob	Smut-machine	I.
1594	Russell, William	Railroad, construction of	IX.
1663	Sabin, William H	Bedsteads, fastening	XVII.
1476	Sacket, Dudley D.	Braiding-machine	III.
	Samuda, Jacob. (See Samuel Clegg.)		
1783	Sargent, Nathan	Mill, sugar grinding	XIII.
1633	Sawyer, Samuel	Corks, cutting	XIV.
1684	Scott, John	Refrigerators	XVII.
1540	Scott, John	Stoves	V.
	Seely, Oran W. (See Dudley Marvin.)		
1908	Sellers, George Escol	Pipes, machinery for making, continuously, from lead.	II.
1620	Sellers, James, and Abraham S Pennock.	Clasps of carpet bags	II.
1633	Sellers, James, and Abr'm L. Pennock.	Mail-bags, &c., mouth piece	XVI.
1774	Seltzer, Adam	Preserving and holding butchers' meat in market-places, apparatus for.	XVII.
1833	Sheckells, Richard W	Railroad switches, shifting	IX.
1786	Sheldon, Oliver	Staves, cutting	XIV.
1818	Sheldon, Samuel	Pricking leather preparatory to stitching	XVI.
1817	Sheldon, Samuel	Pricking leather preparatory to stitching	XVI.
1480	Short, Young Wm	Grubs and bushes, extracting from land	I.
1800	Sickels, Gerard	Cot or cross-bedstead sofa	XVII.
	Smith, Andrew. (See Chas. J. Carr.)		
1782	Smith, Emery	Cotton waste or rags, &c., dressing	III.
1706	Smith, Hiram	Smut machine	I.
1558	Smith, Hiram M	Axles and shafts, oiling horizontal	X.
	Smith, George D. (See Rich. T Downing.)		
1640	Smith, Lyman, jr., and Griffin R. Waring.	Wheel-hubs, carriage, securing the boxes to their axles.	X.
1482	Smith, Mahlon	Plough, shares and cutters of, constructing and fastening.	I.
1488	Smith, Robert M	Mill-stones, dressing	XIII.
1854	Smith, Wm. W., and Benj. Mulliken, jr.	Spring, door	II.
1477	Somerby, Theophilus	Nails, wrought	II.
1478	Southworth, F. H	Water-wheel, tide or current	XI.
1753	Spafford, George	Rags, boiling and washing	III.
1698	Spangler, Samuel	Smut-machine, cleaning grain	I.
1618	Spear, Araunah	Sleigh, metallic, runner	X.
	Spencer, George. (See George Read and others.)		
1676	Spilsbury, Francis, Fanny Corbaux, and Alexander S. Byrne.	Paints or pigments, applying and preserving	IV.
1613	Stafford, David	Thrashing machine	I.
1512	Stanley, Isaac Newton	Carriages or cars, railroad, constructing and mode of dispensing with switches.	X.
	Starkey, Alpheus. (See Julius Pratt.)		
1510	Stebbins, Lucius	Coloring maps, mode of	XVIII.
1771	Stevens, Francis W	Propelling boats, inclined float paddle-wheel	VII.
1475	Stevens, John Hucks, assignee of C. E. Warner, *inventor*.	Boxes, turning wooden	XIV.
1695	Stevens, John Hucks, assignee of E. Fitzgerald, *inventor*.	Splints, match, cutting	XIV.

Alphabetical list of expired patents—Continued.

No.	Patentees.	Inventions or discoveries.	Class.
1655	Stevens, John Hucks, assignee of E. B. Lewis, *inventor*.	Feathers, cleaning and drying	XVII.
1724	Stewart, James A	Forges and furnaces, apparatus for blowing	II.
1639	Stewart, John A	Warming buildings by converting hollow walls into flues.	V.
1793	Still, James	Cooking-stoves	V.
1919	Stillman, Abel	Coffee-roaster	V.
1515	Stimpson, Herbert H	Cooking ranges	V.
1885	Stimpson, James	Railroad carriages, connecting and disconnecting	IX.
1544	Stocker, George, and Jos. Bentley	Guns, pistols, &c	XIX.
1491	Straub, Isaac	Grist-mill, portable	XIII.
1586	Strenge, Geo ge, and Jacob Rohrer	Horse-power	XIII.
1651	Strickland, Horace	Cooking-stoves, draught in	V.
1563	Strong, Charles	Loom, metallic heddle for	III.
1853	Strong, Geo. D., and Jonathan Dodge, assignees of Walter Hunt	Nails, brads, &c., cutting	II.
1579	Stuart, Frederick A	Stumps, extracting	IX.
1790	Talbot, James M	Bands, key, for tobacco casks	II.
1539	Talbott, Samuel	Brick-machine	XV.
	Taylor, Fitch W. (See Alpheus Fobes.)		
1671	Thomas, David	Pens, steel writing	XVIII.
1511	Thomas, Enoch	Trusses, surgeons'	XX.
1611	Thomas, James R	Rifles and other fire-arms	XIX.
1609	Thomas, William	Dock, floating dry	IX.
1513	Thomas, William	Spikes, heading	II.
1483	Thorn, William, and James, jr	Railroad tracks, cleaning	IX.
1498	Thorpe, John, and William G. Angell	Loom, heddle stuff, for making weavers' eye harness.	III.
1698	Tilden, Lester	Cooking-stoves, having elevated ovens	V.
1880	Tilden, Thomas E	Garments, measuring body, and draughting and cutting coats.	XXI.
1902	Tillou, John	Cloth, taking wrinkles out of, while fulling	III.
1602	Tomlinson, Daniel	Hulling rice, machinery for	I.
	Traver, Wm. E. (See Samuel Warner.)		
1534	Treadwell, Daniel	Steam-engine, condensing apparatus of	VI.
1535	Trovillo, James N	Lead, white, preparing	IV.
1688	Turner, John L	Leather, fair, manufacturing	XVI.
1700	Vannini, Joseph	Lottery schemes, mathematical operation of drawing.	VIII.
1551	Vrooman, John N	Bridge, floating swing	IX.
1850	Ward, Allen D	Distilling, cooling the mash used in process of	IV.
	Waring, Griffin R. (See Lyman Smith, jr.)		
	Warner, Chauncey E. (See John Hucks Stevens.)		
1665	Warner, Samuel, Jeremiah Hodgkin, and William E. Traver.	Boots and shoes, heels of	XVI.
1710	Warren, J. Wright, jr	Baths, portable	XX.
1465	Waterman, Henry	Brads, cutting	II.
1860	Webb, Constant	Churn	I.
1807	Weir, John	Blinds, Venetian, raising and lowering	IX.
1739	Wells, Thomas A	Apples, &c., grinding	XIII.
1481	Welsh, Elijah W	Mill-bush, and keeping same close to the spindle	XIII.
	Wemple, Evert L. (See ChaunceyCrain.)		
1750	West, Ammi	Faucet, molasses gate	XI.
1622	Whe tstone, Chas., and Wm. F. Cooke.	Telegraph, electro-magnetic	IX.
1693	Wheeler, Charles E	Stoves	V.
1839	Whipple, Milton D	Wool, cleaning from burrs, &c., and ginning cotton.	III.
1826	White, Samuel White	Hats, buoyant, used as life-preservers	III.
1728	Whitman, Luther	Thrashing-machine, conducting the straw and grain from the thrasher.	I.
1653	Whitney, Asa	Steam-engine, locomotive	VI.
1522	Whitney, Baxter D., and George W. Lawton.	Cloth, stretching, in the process of fulling	III.
1484	Willard, Julius	Brick-machines	XV.
1897	Williams, Thomas Robinson	Felt cloths, without spinning and weaving, machinery for.	III.
1559	Williams, Thomas R	Stuffs, &c., machinery for manufacture of	III.
1874	Williams, William Morrett	Lock and key	III.
1740	Williston, John P., and Willard A. Arnold	Cooking-stoves, elevated ovens of	V.
	Wilson, Geo. W. (See Wm. D. Beasom.)		
1867	Winans, N. T., and Thaddeus Hyatt	Splints, match, manufacturing	XIV.
1868	Winans, Ross	Steam-engine, locomotive, regulating waste steam	VI.
1896	Winslow, Humphrey	Crackers, making	XVII.
1708	Winslow, Seth E	Balance or scale beams	XII.
1599	Withey, William P	Fire-escapes	XXII.
1582	Wolcott, Alexander S	Likenesses, taking, by means of concave reflector and plate.	XVIII.
1865	Wood, Loftis	Cabooses, ships', and other cooking-stoves	V.
1589	Woodward, Abijah	Water-wheel tub	XI.
1523	Woodward, Thomas	Pencil-case, ever-pointed	XVIII
1525	Woodward, Thomas	Pencil, ever-pointed	XVII.
	Woodworth, Benjamin. (See Joseph H. Moore.)		
1613	Worley, Joseph	Straw cutters	I.

Alphabetical list of expired patents—Continued.

No.	Patentees.	Inventions or discoveries.	Class.
1877	Wyeth, Nathaniel J	Ice cutting	XXII.
1666	Wyeth, Nathaniel J	Ice, machinery for raising blocks of, &c	XXII.
1879	Wyeth, Nathaniel J	Ice, machinery for reducing blocks to uniform thickness.	XXII.
1878	Wyeth, Nathaniel J	Ice, machinery for raising blocks of, from water, and depositing same on sleds.	XXII.
1876	Wyeth, Nathaniel J	Ice, in blocks, sleds for transporting	X.
1866	Young, Edward L	Spinning, flier to twisting silk	III.

ALPHABETICAL LIST OF PERSONS WHOSE PATENTS FOR DESIGNS HAVE EXPIRED DURING THE YEAR 1854.

No.	Patentees.	Designs.
138	Albro, James, jr	Floor cloth.
154	Barry, Thomas, assignor to S. H. Ransom	Stoves.
137	Batchelor, Nathaniel	Clock frames.
125	Biggins, Henry, assignor to James L. Jackson	Grates, fire place.
139	Booth, D. A	Buttons, ornamental.
113	Bowers, George P., and Joseph Pratt	Stoves.
143	Brownell, Asa C	Stoves.
133	Burgess, John, assignor to Gilbert Geer	Stoves.
147	Bush, Roswell	Stoves.
148	Conklin, James H	Stoves.
108	Cresson, Wm. P., Jacob Beesley, and David Stuart—the last *two* assignors to the *first*	Stoves, ornaments.
117	Cresson, Wm. P., S. H. Sailor, D. Stuart, and J. Beesley—the last *three* assignors to the *first*	Stoves.
116	Cresson, Wm. P., D. Stuart, J. Beesley, and S. A. Watson—the last *three* assignors to the *first*	Stoves.
149	Gale, William, and Nathaniel Hayden	Spoons, forks, &c.
150	Gale, William, and Nathaniel Hayden	Spoons and forks.
119	Geer, Gilbert	Stoves.
	Geer, Gilbert. (See John Burgess.)	
158	Gibbs, Samuel W., assignor to Jesse C. Potts	Stoves.
160	Gibbs, Samuel W., assignor to Augustus Quackenboss	Stoves.
198	Gibney, Michael	Spoons and forks.
107	Goodhue, Daniel F., and Charles Guild	Stoves.
161	Goodhue, Daniel F., and Charles Guild	Stove plate.
155	Gordon, James G	Stoves.
156	Green, Jeremiah D., assignor to Viall & Warren	Stoves.
159	Guild, Charles	Stoves.
	Guild, Charles. (See Daniel F. Goodhue.)	
122	Hampton, Adam	Grates, fire-place.
	Hayden, Nathaniel. (See William Gale.)	
153	Heermans, Jacob	Stoves.
144	Hickok, William	Stoves.
	Jackson, James L. (See H. Biggins.)	
121	Jackson, James L	Grates, fire place.
	Johnson & Cox. (See Ezra Ripley.)	
	Liebrandt, Frederick. (See Chas. W. Warnich.)	
123	Low, Peter	Stoves, cooking.
	Lithgow, Jas. S. (See A. S. Wallace.)	
114	Moore, John C	Spoon handles, &c.
124	Moore, John C	Spoons.
162	Palmer, Lucius O, assignor to John F. Seymour	Stoves.
118	Penniman, Elijah P	Stoves.
110	Penniman, Elijah P., assignor to Cheney, Hunter, and Rowe	Stoves, cooking.
	Potts, Jesse C. (See Sam'l W. Gibbs.)	
	Quackenboss, Augustus. (See Sam'l W. Gibbs.)	
103	Ransom, Samuel H., assignee of Thos. Barry	Stoves.
104	Ransom, Samuel H., assignee of Thos. Barry	Stoves.
105	Ransom, Samuel H., assignee of A. Whitney	Stoves.
106	Ransom, Samuel H	Stoves.
141	Ransom, Samuel H	Stoves.
	Ransom, Samuel H. (See Thomas Barry.)	
113	Rathbone, John F	Stoves.
	Rathbone, John F. (See Peter J. Simmons.)	
142	Rathbone, John F	Stoves.
157	Rathbone, John F	Stoves.
134	Resor, William	Stoves.
111	Ripley, Ezra, assignor to Johnson & Cox	Stoves.
131	Ripley, Ezra, assignor to Johnson & Cox	Stoves, parlor.
132	Ripley, Ezra, assignor to Johnson & Cox	Stoves, parlor.
151	Ripley, Ezra, assignor to Johnson & Cox	Stoves.
140	Robbins, Rowland A	Stoves.

Alphabetical list of patents for designs—Continued.

No.	Patentees.	Designs.
	Seymour, John F. (See Lucius O. Palmer.)	
145	Shepard, Chas. J.	Stoves.
112	Simmons, Peter J., assignor to Jno. F. Rathbone	Stoves.
146	Sizer, Geo. W. & Henry	Stoves.
126	Smith, Elihu	Stoves, parlor.
	Viall, James. (See Jeremiah D. Greene.)	
130	Vose, Samuel D	Stoves, air-tight.
129	Wager, James	Stoves.
127	Wallace, Allen S., and Jas. S. Lithgow	Stoves.
120	Warnich, Chas. W., and Frederick Liebrandt	Ovens, frames for.
	Warren, George. (See J. D. Greene.)	
	Whitney, Amaziah. (See S. H. Ransom.)	
152	Wight, Geo. W.	Woolens, printing on.
109	Wolff, Chas.	Stoves.
135	Woolson, Chas. J.	Stoves.
136	Woolson, Chas. J.	Stoves.

CLASSIFIED LIST OF PATENTS GRANTED DURING THE YEAR 1854, WITH THE NAMES OF PATENTEES, PLACES OF RESIDENCE, AND DATE OF PATENTS.

CLASS I.—AGRICULTURE, *including instruments and operations.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Beehives	John H. Dennis	Boston, Mass	Jan. 24, 1854.
Beehives	Clark Wheeler	Little Valley, Cattaraugus county, N. Y.	May 9, 1854.
Beehives	Henry Eddy	N. Bridgewater, Mass	Sept. 19, 1854.
Cheese-hoops	John Beach	De Ruyter, Madison county, N. Y.	May 23, 1854.
Cheese-vats	Henry A. Roe	West Andover, Ohio	Dec. 12, 1854.
Churns	Isaac L. Dickenson	Richmond, Wayne county, Ind	Jan. 31, 1854.
Churns	Robert W. Davis	Rodgersville, N. Y	Feb. 28, 1854.
Churns	R. H. Harrison, assignor to R. H. Harrison and J. J. Gallaher, jr.	Washington, D. C	Mar. 28, 1854.
Churns	Elbridge Webber	Gardiner, Maine	Dec. 5, 1854.
Clover-hullers	A. B. Crawford	Wooster, Ohio	Nov. 28, 1854.
Corn-crushers. (See Class XIII.)			
Corn, mill for shelling and grinding	Henry R. Miller	Louisville, Ky	Dec. 5, 1854.
Corn-shellers	George A. Xander	Hamburg, Pa	Jan. 3, 1854.
Corn-shellers	Banford Gilbert	Strongsville, Ohio	Jan. 3, 1854.
Corn-shellers	A. J. Smith	Piqua, Miami county, Ohio	Aug. 29, 1854.
Corn-shellers	Gilbert Maynard	Gill, Franklin county, Mass	Sept. 12, 1854.
Corn-shellers	Samuel Gumaer	Aurora, Ill	Nov. 7, 1854.
Corn-shellers	Jeremiah P. Smith	Hummelstown, Pa	Nov. 7, 1854.
Cultivators	Enos Boughton	East Bloomfield, N. Y	Jan. 31, 1854.
Cultivators	Charles K. Farr	Hinds county, Miss	May 9, 1854.
Cultivators	Whitman Price	Goldsborough, N. C	June 6, 1854.
Cultivators	Griffith Lechtenthaler	Limestoneville, Pa	July 25, 1854.
Cultivators	Charles H. Dana	West Lebanon, N. H	July 25, 1854.
Cultivators	Charles K. Farr	Auburn, Miss	Aug. 1, 1854.
Cultivators	Daniel W. Shares	Hamden, Ct	Aug. 1, 1854.
Cultivators	William T. Bazemore	Macon, Ga	Aug. 29, 1854.
Cultivators	William Bancroft	Whiteford, Ohio	Nov. 14, 1854.

Classifie l list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Cultivators	Job Brown	Lawn Ridge, Ill	Nov. 14, 1854.
Cultivators, rotary	George B. Field	St. Louis, Mo	Mar. 14, 1854.
Cultivators, rotary	Philander Shaw	Abington, Mass	Mar. 14, 1854.
Cultivator, rotary	H. M. Johnson	Carlisle, Pa	June 27, 1854.
Cultivators' teeth, machines for forming	David B. Rogers	Pittsburg, Pa	Mar. 28, 1854.
Cutter, corn-cob	Isaac Straub	Cincinnati, Ohio	July 25, 1854.
Eggs, hens' in the nest, devices for preserving	C. V. Ament	Dansville, N Y	Mar. 21, 1854.
Forks, hay and manure, shanks of	R. M. Hine, assignor to Silsby and Hines	Seneca Falls, N. Y	Jan. 3, 1854.
Fruit-picker	John Melendy	Southbridge, Mass	June 27, 1854.
Grain, cleaning, screens for hulling clover-seed and.	Martin H. Mansfield	Ashland, Ohio	Aug. 1, 1854.
Grain, threshers and cleaners of	James Robinson	West Hebron, N. Y	Jan. 24, 1854.
Grain, threshers and separators of	Charles R. Soule	Fairfield, Vt	Jan. 24, 1854.
Grain, threshers and separators of	John Zink	Greensville, Augusta county, Va	Feb. 21, 1854.
Grain, threshers and separators of the feeding-hoppers of.	Spencer Moore	Central Bridge, N. Y	Oct. 3, 1854.
Grain-threshers	J. L. Garlington	Snapping Shoals, Newton county, Ga.	Mar. 21, 1854.
Granaries	Ebenezer Ford	Spring Cottage, Miss	Oct. 24, 1854.
Grape-frame	S. Oscar Cross	Sandy Hill, Washington county, N. Y.	June 27, 1854.
Harrows	Washington F. Pagett	Stone Bridge, Clarke county, Va.	May 2, 1854.
Harrows	William Anderson	Jacksonville, N. Y	Aug. 1, 1854.
Harrows	Jacob Myers	Powhatan Point, Belmont county, Ohio.	Aug. 15, 1854.
Harrows	John G. McCauley	Stone Bridge, Va	Aug. 29, 1854.
Harrows	E. L. Hager	Frankfort, N. Y	Dec. 12, 1854.
Harrows, flexible	W. B. & G. M. Ramsay	South Strabane, Washington county, Penn.	May 2, 1854.
Harvesters	Solyman Bell	Marseilles, Ill	Feb. 28, 1854.
Harvesters	Philip H. Kells	Hudson, N. Y	Mar. 21, 1854.
Harvesters	Wm. H. Seymour	Brockport, N. Y	Mar. 28, 1854.

Harvesters	Ira Reynolds	Republic, Seneca county, Ohio	June 13, 1854.	
Harvesters, clover	Thomas S. Steadman	Murray, Orleans county, N. Y.	May 23, 1854.	
Harvesters, clover	John S Gage	Dowagiac, Mich	Dec. 19, 1854.	
Harvester cutters	Bronson Murray	Farm Ridge, Ill	June 13, 1854.	
	Assignor to T. R. Spencer	Geneva, N. Y.		
	Assignor to J. S. Wright	Chicago, Ill.		
Harvesters, discharge apparatus of	A. J. Cook	Enon, Clark county, Ohio	Mar. 28, 1854.	
Harvesters, grain	Aaron Palmer	Brockport, Wis.	Jan. 24, 1854.	
	S. G. Williams	Janesville, Wis.		
Harvesters, grain	Daniel S. Middlekauff	Hagerstown, Md.	Mar. 14, 1854.	
Harvesters of grain	Benjamin G. Fitzhugh	Frederick, Md	Mar. 28, 1854.	
Harvesters, grain and grass	Henry Greene	Ottawa, La Salle county, Ill.	Mar. 21, 1854;	antedated Sept. 21, 1853.
Harvesters of grain and grass	John J. Weeks	Oyster Bay, N. Y.	Sept. 26, 1854.	
Harvesters, grain and grass	John H. Manny	Freeport, Ill	Oct. 17, 1854;	antedated June 15, 1854.
Harvesters, grain and grass	Jacob Swartz	Buffalo, N. Y.	Nov. 14, 1854.	
Harvesters, grain and grass	Cyrenus Wheeler, jr.	Poplar Ridge, N. Y.	Dec. 5, 1854.	
Harvesters, grain and grass	Wm. F. Ketchum, assignor to R. L. Howard.	Buffalo, N. Y.	Dec. 19, 1854.	
Harvesters, grass	Martin Hallenbeck	Albany, N. Y.	April 18, 1854.	
Harvesters, grass	George Esterly	Heart Prairie, Walworth county, Wis.	June 27, 1854.	
Harvesters, grass, track cleaners to	Abner Whiteley.	Springfield, Ohio	Aug. 22, 1854.	
Harvesters, guard fingers of	Wm. F. Ketchum, assignor to R. L. Howard.	Buffalo, Erie county, N. Y.	April 25, 1854.	
Harvesters, maize	Seneca Lapham, deceased: Wm. Lapham, executor of.	Salem, Ohio	April 18, 1854.	
Harvesters, maize	Gardner A. Bruce	Mechanicsburg, Ill.	Aug. 29, 1854.	
Harvesters, maize	James S. Burnham	West Jefferson, Ohio.	Sept. 19, 1854.	
Harvester rakes	Cyrus Roberts	Belleville, St. Clair county, Ill.	May 16, 1854.	
Harvester rakes	Collins B. Brown	Upper Alton, Madison county, Ill.	July 11, 1854.	
Hay elevators	Thomas T. Jarrett	Horsham, Montgomery county, Pa	May 30, 1854.	
Hay knives	Seth Whalen	West Milton, Saratoga county, N. Y.	May 2, 1854.	
Hedge trimmer	Leonard Woods	Quincy, Ill.	July 25, 1854.	
Hoes	Moses Gates	Gallipolis, Ohio.	Dec. 12, 1854.	
Hoes, planting	Wm. G. Stirling	Bridgeport, Conn.	Feb. 14, 1854.	
Hog pens	Robert M. Abbe	Thompsonville, Hartford county, Conn.	Aug. 29, 1854.	
Hullers, clover, concaves of	Thomas Carpenter	Manlius, N. Y.	Mar. 21, 1854.	

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Manure excavators	Abraham R. Hurst	Harrisburg, Pa	Aug. 29, 1854.
Manure and lime spreaders	Joseph W. Fawkes	Christiana, Lancaster county, Pa.	Aug. 29, 1854.
Manure spreader	Elbridge Marshall	Clinton, N. J.	Aug. 22, 1854.
Manure and sand loader	Horatio G. Marchant	Annisquam, Essex county, Mass.	May 9, 1854.
Milkers' protector	John M. Weare	Seabrook, Rockingham county, N. H.	May 2, 1854.
Moth-killer	W. A. Flanders	Sharon, Windsor county, Vt.	June 6, 1854.
Mowing machine	Alanson Gale	Poughkeepsie, N. Y.	July 25, 1854.
Planters, corn	Samuel Malone	Fremont, Ill.	Jan. 3, 1854.
Planters cotton-seed	George W. Cooper	Palmyra, Lee county, Ga	Mar. 7, 1854.
Planters, seed	Lewis W. Colver	Louisville, Ky	Feb. 28, 1854.
Planters, seed	Thomas D. Henson and George Rohr	Charlestown, Va	Feb. 28, 1854.
Planters, seed	John G. Snyder and Joseph Young	Duncannon, Pa	Feb. 28, 1854.
Planters, seed	Luther B. Fisher	Coldwater, Branch county, Mich.	Mar. 7, 1854.
Planters, seed	J. C. Gaston	Reading, Hamilton county, Ohio	Mar. 7, 1854.
Planters, seed	J. G. Macfarlane	Centre, Perry county, Pa.	Mar. 14, 1854.
Planters, seed	Charles W. Billings	South Deerfield, Mass.	Mar. 14, 1854.
Planters, seed	Welcome Sprague	Ellicottsville, Cattaraugus county, N. Y.	Mar. 14, 1854.
Planters, seed	David & Herman Wolf	North Lebanon, Pa	Mar. 21, 1854.
Planters, seed	Luther B. Fisher	Coldwater, Branch county, Mich.	Mar. 28, 1854.
Planters, seed	Thomas Carter	Laurens District, S. C	April 11, 1854.
Planters, seed	Elbridge Marshall	Clinton, Hunterdon county, N. J.	April 11, 1854.
Planters, seed	George T. Enoch and Daniel Wissenger	Springfield, Ohio	May 9, 1854.
Planters, seed	William B. Johnson	Staunton, Va.	June 6, 1854.
Planters, seed	Waitman Davis	Morgantown, Monongalia county, Va.	June 6, 1854.
Planters, seed	Daniel Hill	Bartonia, Randolph county, Ind.	June 27, 1854.
Planters, seed	Samuel Ide	East Shelby, Orleans county, N. Y.	July 4, 1854.
Planters, seed	Charles A. Wakefield	Plainfield, Mass	July 25, 1854.
Planters, seed	Wm. Bullock, assignor to Burton G. Morss	Red Falls, N. Y	Aug. 1, 1854.
Planters, seed	J. T. & L. J. Wait	Waterloo, S. C	Aug. 15, 1854.

Planters, seed	John H. King, jr.	Georgetown, D.C	Aug. 29, 1854.
Planters, seed	Samuel M. Hockman	Tom's Brook, Va	Aug. 29, 1854.
Planters, seed	Wm. Redick	Uniontown, Fayette county, Pa	Aug. 29, 1854.
Planters, seed	Louis Daser	Washington, D. C	Sept. 5, 1854.
Planters, seed	Charles H. Dana	West Lebanon, N. H	Sept. 5, 1854.
Planters, seed	Absalom B. Earle	Franklin, N. Y	Oct. 24, 1854.
Planters, seed	George W. Lee	Ercildown, Pa	Nov. 21, 1854.
Planters, seed	Milan Waterbury	Cuba, N. Y	Nov. 21, 1854.
Planters, seed	John Andrews, assignor to John Andrews, N. A. Richardson, and Gardner Symmes.	Winchester, Mass	Dec. 12, 1854.
Planters, seed, and cultivators	Daniel W. Shares	Hamden, Conn	Dec. 12, 1854.
Ploughs	John S. Hall	Manchester, Alleghany county, Pa.	Feb. 7, 1854.
Ploughs	Jacob Revercomb	Botetourt Springs, Roanoke county, Va.	June 27, 1854.
Ploughs	Thomas F. Chapin	Walpole, N. H	July 25, 1854.
Ploughs	John S. Hall	Manchester, Pa	Aug. 1, 1854.
Ploughs	Joshua Gibbs	Canton, Stark county, Ohio	Aug. 15, 1854.
Ploughs	O. G. Ewing	Heart Prairie, Walworth county, Wis.	Aug. 29, 1854.
Ploughs	Henry F. Baker	Centreville, Ind	Oct. 24, 1854.
Ploughs	Jonathan Hibbs	Tullytown, Pa	Nov. 14, 1854.
Ploughs, ditching	Joseph C. Tiffany	Coxsackie, Greene county, N. Y.	April 25, 1854.
Ploughs, ditching	John Lyon	Harrisburg, Iowa	July 25, 1854.
Ploughs, ditching, and excavator	Charles A. Robbins	Iowa City, Iowa	Nov. 14, 1854.
Ploughs, fastenings of	David & Samuel Swarts	Tom's Brook, Va	Aug. 22, 1854.
Ploughs, handles, and other articles, machine for polishing.	Thomas Blanchard	Boston, Mass	Feb. 7, 1854.
Ploughs, mould-boards of	Edwin M. Bard	Philadelphia, Pa	Mar. 14, 1854.
Ploughs, for planting potatoes	Whitman Price	Goldsborough, N. C	Aug. 29, 1854.
Potato diggers	Charles H. Dana	West Lebanon, Grafton co., N. H.	May 16, 1854.
Potato diggers	Galusha J. Bundy	Lyndon, Caledonia county, Vt	July 4, 1854.
Potato diggers	Ives W. McGaffey	Philadelphia, Pa	Nov. 7, 1854.
Rakes	D. M. Cummings	Enfield, Mass	Aug. 15, 1854.
Rakes, horse	Moses D. Wells	Morgantown, Va	Aug. 15, 1854.
Scythe-fastenings	S. B. Bachelor	Watertown, N. Y	Feb. 28, 1854.
Scythe-fastenings	Thomas C. Ball, assignor to Nathaniel Lamson.	Shelburne Falls, Mass	Nov. 21, 1854.
Scythe, form of	Joseph W. Robinson	Kirkland, Oneida county, N. Y.	Mar. 14, 1854.
Separators, clover	Christian Reif	Hartleton, Pa	Aug. 8, 1854.
Separators, straw and grain	Archibald Bowen	Wadesville, Va	Oct. 24, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Spade, ditching	David Stouder	New Burlington, Ind	July 25, 1854.
Straw-cutters	William S. Dillehay	Floydsburg, Ky	Jan. 3, 1854.
Straw-cuters	Warren Gale	Louisville, Ky	Mar. 9, 1854.
Straw-cutter	Robert Hodgin	Barnesville, Belmont county, Ohio	May 2, 1854.
Straw-cutters	Absalom B. Earle	Franklin, N. Y	Aug. 22, 1854.
Straw-cutters	Warren Gale	Troy, N. Y	Sept. 12, 1834.
Straw-cutters	S. M. Yeaman	Elizabethtown, Ky	Nov. 7, 1854.
Straw-cutters, feed apparatus of	Harvey Trumbull	Centre College, Ohio	Jan. 24. 1854.
Straw-cutters, springs to the knives of	Joseph B. Stockton	Warren county, Ky	Sept. 26, 1854.
Thrashers	William Russell Palmer	Elizabeth City, N. C	June 13, 1854; English patent, April 11, 1853.
Thrashing-machine	William M. Palmer	Palmyra, Me	Aug. 1, 1854.
Vine, training the	Joseph Sollenberger	Higginsport, Ohio	April 4, 1854.
Winnowers	Michael Shimer	Union Township, Bedford county, Pa.	Feb. 7, 1854.
Winnowers	Josiah Turner and W. C. Sturoc	Sunapee, Sullivan county, N. H	Feb. 7, 1854.
Winnowers	Henry H. Beach	Chicago, Ill	Aug. 15, 1854.
Winnowers, cranberry	Phanuel Flanders	Lowell, Mass	April 4, 1854.
Winnowers, grain	Joseph Bone	Warrenton, Jefferson county, Ohio.	June 20, 1854.
Winnowers of grain	B. D. Sanders	Holliday's Cove, Brooke county, Va.	June 27, 1854.
Winnowers, grain	Joseph Barker	Honesdale, Pa	Oct. 31, 1854.
Winnowers, grain	William Moore	Belleville, Ohio	Nov. 14, 1854.
Winnowing machine	Jos. Keech and Stephen Stilwell	Waterloo, Seneca county, N. Y	June 13, 1854.
Yokes, neck	John R. Pierce	Castile, Wyoming, N. Y	May 30, 1854.
Yokes, neck	Schuyler Briggs and John G. Talbot	Sloansville, N. Y	Sept. 26, 1854.
Yokes, ox	Heman B. Hammon	Bristolville, Trumbull county, Ohio.	May 16, 1854.
Yokes, ox	Isaac W. Little	Newburg, Essex county, Mass	May 16, 1854.

CLASS II.—METALLURGY, *and manufacture of metals, and instruments therefor.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Blowing-fan	Thos. Wallace and Elizabeth Backmeister, administratrix of Henry Backmeister.	Philadelphia, Pa	June 6, 1854.
Bit, expansive	Asa Weeks	South Boston, Mass	May 2, 1854.
Bits for carving machines	Charles F. Bauersfeld	Cincinnati, Ohio	Aug. 1, 1854.
Bit or drill-stock	Dexter H. Chamberlain	Boston, Mass	Feb. 7, 1854.
Brace stocks, catch for holding the bit in	Chas. M. Daboll, assignor to C. M. Daboll and A. P. Daboll.	New London, Conn	May 16, 1854.
Brads, machines for cutting	William J. Miller	Cold Spring, Putnam county, N. Y.	June 27, 1854.
Buckles	Wm. Shove	Elizabethport, N. J	June 13, 1854.
Cards, cotton, machines for grinding	Nathan Smith and Asa Crandall	North Kingston, Washington county, R. I.	Mar. 14, 1854.
Chain-hook	Willis Straw	Dalton, Coos county, N. H	July 11, 1854.
Chains, jack, making links of machines for	A. Wyckoff	Wellsburg, N. Y	Feb. 14, 1854.
Clamps for holding steel-plates while being hardened and tempered.	Chas. W. Fillmore	Coral, Ill	Jan. 10, 1854.
Cut-nail machine	John P. Sherwood	Fort Edward, N. Y	Dec. 19, 1854.
Cutter for metallic bars and rods	John Gallagher	New York, N. Y	May 2, 1854.
Dies, finishing, in machine for making rings from sheet metal.	Charles W. Dickenson	Newark, N. J	July 25, 1854.
Dies for making augers	Ezra L'Hommedieu	Chester, Conn	Aug. 29, 1854.
Dies for making seamless metal-tubes	Timothy D. Jackson	New York, N. Y	Feb. 28, 1854.
Dies, spring, arrangement of, in machines for making clinch-rings.	G. M. Patten	Bath, Lincoln county, Maine	May 2, 1854.
Door-fastener, portable	Geo. W. Griswold	Carbondale, Pa	Sept. 5, 1854.
Door-knobs, instrument for manufacturing	Artemas Rogers	Painesville, Ohio	Aug. 22, 1854.
Drill for metal drilling	Abiel Pease	Enfield, Conn	April 4, 1854.
Drills, metal	William Wakeley	Homer, N. Y	Nov. 28, 1854.
Drills, pawl	Simon Ingersoll	New York, N. Y	Oct. 10, 1854.
Fences, iron	Matthias P. Coons	Brooklyn, N. Y	April 18, 1854.
Fence, iron picket	Matthew Walker, assignor to M. Walker & Sons.	Philadelphia, Pa	July 11, 1854.
Fence, multigrade iron	Matthias P. Coons	Brooklyn, N. Y	Nov. 14, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Fence posts, device for securing ends of wires in.	Wm. G. Lavers	New York, N. Y.	July 25, 1854.
Fences, wire-rivet clamp for	Matthias P. Coons	Brooklyn, N. Y	June 6, 1854.
Forging and punching machines, drop and die.	Solomon Andrews	Perth Amboy, N. J.	April 4, 1854.
Furnaces for making wrought-iron directly from the ore.	Thos. W. Harvey, Edward P. Cowles, and H. A. Harvey, administrators of assignors to the Harvey Steel and Iron Company.	New York, N. Y.	Aug 22, 1854.
Furnaces for making iron direct from the ore	Martin Bell and E. B. Isett	Tyrone, Pa	Nov. 14, 1854.
Glaziers' points, machines for cutting	Ward Eaton	Carbondale, Luzerne county, Pa.	May 16, 1854.
Gold amalgamators	Robert H. Collyer	New York, N. Y	June 6, 1854.
Gold amalgamators	A. S. Wright	San Francisco, Cal.	Aug. 15, 1854.
Gold collector	James Perry	New York, N. Y.	Dec. 12, 1854.
Gold and silver amalgamating	A. K. Eaton	New York, N. Y	April 4, 1854.
Gold separator	David Pierce	Woodstock, Vt.	Jan. 10, 1854.
Gold separator	Edw. L. Seymore, assignor to Danl. B. Brown.	New York, N. Y.	Sept. 19, 1854.
Hammers, steam	John L. L. Morris	Reading, Pa.	Jan. 31, 1854.
Hammers, steam	Peter L. Weimer	Reading, Pa.	Jan. 31, 1854.
Hammers, steam	Thomas Sumner	Paterson, N. J.	June 27, 1854.
Hammers, trip	Bernard Hughes	Rochester, Monroe county, N. Y.	May 16, 1854.
Harvesters, grain and grass	Abner Whiteley	Springfield, Ohio	Sept. 19, 1854.
Hasps, trunk lock	Conrad Liebrich	Philadelphia, Pa.	May 2, 1854.
Hinges, cast	Nelson Gates	Cincinnati, Ohio	Aug. 29, 1854.
Hinges, door	John Elgar	Baltimore, Md.	April 11, 1854.
Hinges, inclined plane, arrangement of friction roller in.	Enoch Woolman	Damascoville, Columbiana county, Ohio.	May 9, 1854.
Hinges, machines for making	Edward Brown, assignor to the Scovill Manufacturing Company.	Waterbury, New Haven county, Conn.	May 16, 1854.
Hinges, shutter	Harvey Lull, assignor to H. Lull & Richard Porter.	South Coventry, Conn.	Jan. 31, 1854; antedated Jan 2, 1854.
Hinges, shutter, self-fastening	Ambrose Nicholson	Poland, Herkimer county, N. Y.	Mar. 21, 1854.
Hinge, spiral or worm joint	Perry G. Bates	Waterbury, Conn.	Jan. 17, 1854.
Hinges, spring, double-acting	Theodore F. Englebrecht	New York, N. Y.	Jan. 3, 1854.
Horse-shoes	William H. Towers	Philadelphia, Pa.	July 25, 1854.

Horse-shoeing apparatus	Noah Warlick	Lafayette, Ala.	Aug. 29, 1854.
Horse-shoes, machine for forging	Griffiths & Shield, assignors to Robert Griffiths.	Alleghany City, Pa	Dec. 19, 1854.
Iron, coating with brass or copper	Hugh Burgess	England	July 18, 1854. Patented in England Feb. 17, 1854.
Iron, making wrought direct from the ore	James Renton	Cleveland, Ohio	Oct. 24, 1854.
Iron-railing strap, device in constructing	M. Lachenmaier	Philadelphia, Pa.	May 2, 1854.
Iron, sheet, manufacture of	Ebenezer G. Pomeroy	Pittsburg, Pa.	Jan. 31, 1854.
Locks	Charles Wilson	Springfield, Mass.	Nov. 7, 1854.
Locks	John B. Brennan	Mount Vernon, N. Y.	Nov. 7, 1854.
Locks, bank	Linus Yale	Newport, N. Y.	Feb. 28, 1854.
Locks, bank	William Hall	Boston, Mass	June 27, 1854.
Locks, bank	A. C. Harig & D. C. Stoy	Louisville, Ky.	July 25, 1854.
Locks, door	William Cayce	Franklin, Tenn	Aug. 1, 1854.
Locks, door	Jacob Weimar	New York, N. Y.	Dec. 12, 1854.
Locks, door, extension bit, guard-key for	Wm. Damerel	Brooklyn, N. Y.	May 9, 1854.
Locks, door, portable	Jos. W. Webb	Washington, D. C.	Feb. 7, 1854.
Locks, operating bolts and, for controlling series of doors.	David J. Stagg	Hoboken, Hudson county, N. J.	June 13, 1854.
Locks, pad	Stephen White and Henry C. Jones	Newark, N. J.	June 20, 1854.
Locks, safe	F. C. Goffin, assignor to A. B. Ely	New York, N. Y. Boston, Mass	Mar. 21, 1854.
Metal bars, machines for straightening heavy	Isaac B. Howe	Northfield, Vt.	Dec. 19, 1854.
Metal boxes, sheet, machines for closing	Charles G. Everitt	Brooklyn, N. Y.	Nov. 21, 1854.
Metallic bodies, squeezing and compressing, machines for.	Ebenezer A. Lester	Boston, Mass	Jan. 10, 1854.
Metallic plates, manufacture of hollow slabs, and flanged.	Thomas Prosser	New York, N. Y.	Jan. 24, 1854.
Metallic castings, machines for moulding for	David Brown, assignor to J. F. Clark and D. Brown.	Baltimore, Md.	June 27, 1854.
Metal of unequal thickness, machines for uniting plates of.	Jeremiah Carhart	New York, N. Y.	Aug. 1, 1854.
Metal, machines for bending	William W. Cumberland	Newark, N. J.	Dec. 12, 1854.
Metals, machines for scraping	Jeremiah Stever	Bristol, Conn	Dec. 12, 1854.
Metal plates, corrugating	Richard Montgomery	New York, N. Y.	Feb 21, 1854.
Metal separators	Thomas J. Chubb	New York, N. Y.	Dec. 19, 1854.
Metal, sheet, machines for bending	William Webster	Morrisania, Westchester county, N. Y.	Mar. 28, 1854.
Metal, sheet, machine for corrugating	Solomon G. Booth	New York, N. Y.	April 4, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Metals, machines for planing	Dustin F. Mellen, assignor to D. F. Mellen, John F. Augustus, and Samuel A. Eaton.	Wentworth, N. H.	Aug. 1, 1854.
Metals, plating	Robert G. Pine	Newark, N. J.	July 11, 1854.
Metals, baths for coating with other metals	George Rogers	Enfield, Middlesex, England	May 16, 1854.
Metals and stone, machines for planing. (See Class XV.)			
Minerals and other substances, machine for crushing and grinding.	T. O. Cutler	New York, N. Y.	Dec. 12, 1854; patented in England Jan. 23, 1854.
Moulding hollow ware	James J. Johnston James V. Cunningham	Alleghany City, Pa. Pittsburg, Pa.	June 6, 1854.
Nail, cut, machines	Thomas H. Barlow	Lexington, Ky.	June 20, 1854.
Nail machines	John Wotton	Boonton, N. J.	Aug. 29, 1854.
Nail plate feeders	Jos. Iler and Wm. Fitzpatrick	Troy, N. Y.	June 13, 1854.
Nuts, machines for making	Jacob Reese	Sharon, Mercer county, Pa.	Feb. 7, 1854.
Ores, machine for crushing	Wm. Henry Plumb	New York, N. Y.	Dec. 5, 1854.
Ores, &c., machinery for crushing and pulverizing.	Samuel Gardiner, jr.	New York, N. Y.	July 25, 1854.
Ores, &c., mills for grinding	William Ball	Chicopee, Mass.	April 11, 1854.
Ores, pulverizing, machines for	A. K. Eaton	New York, N. Y.	Feb. 28, 1854.
Ore-stamping machines	Joseph F. Laird	Philadelphia, Pa.	July 4, 1854.
Pins, machines for sticking	John B. Ferry	Hartford, Conn.	Jan. 3, 1854.
Pins, machines for sticking	Thomas W. Harvey, assignor to John B. Terry	New York, N. Y. Hartford, Conn.	Jan. 3, 1854.
Polishing wheels	Benjamin Webb	Unadilla Forks, N. Y.	July 25, 1854.
Punches and dies for punching watch-hands	Aaron L. Dennison	Roxbury, Mass.	Aug. 15, 1854.
Punches, metal, portable	Samuel McKenna	Cincinnati, Ohio	Mar. 21, 1854.
Quartz-crushers	J. W. Cochran	New York, N. Y.	Nov. 28, 1854; patented in England Nov 21, 1853.
Quartz-crushers	T. O. Cutler	Jersey City, N. J.	Jan. 31, 1854.
Quartz-crushers	Smith W. Bullock, assignor to Stillman, Allen, & Co.	New York, N. Y.	Feb. 28, 1854.

Quartz-crushers	Heman Gardiner	New York, N. Y	Mar. 21, 1854; patented in England July 5, 1853.
Quartz-crushers	Daniel Poole	Mount Carmel, Wabash county, Ill.	May 30, 1854.
Quartz-crushers	D. C. Ambler	New York, N. Y	June 20, 1854.
Quartz-crushers	Heman Gardiner	New York, N. Y	July 4, 1854.
Quartz-crushing machines	James Hamilton	New York, N. Y	Jan. 3, 1854.
Quartz and minerals, crushing and grinding	Samuel Perkes	Walbrook, England	June 13, 1854; patented in England Oct. 12, 1852.
Quartz-pulverizer	Robert H. Colyer	New York, N. Y	Jan. 3, 1854.
Rolling axles and shafts	Jacob Reese	Sharon, Pa	Jan. 24, 1854.
Rolling, iron machinery, hanging the fore-plate to.	Jacob Reese	Sharon, Pa	Feb. 14, 1854.
Rolling shoulders on axles, machines for	Wm. Van Anden	Poughkeepsie, N. Y	Aug. 22, 1854.
Safe	Benjamin Sherwood	New York, N. Y	Oct. 24, 1854.
Safes, fire and burglar-proof	F. C. Goffin	New York, N. Y	Feb. 14, 1854.
Safes, iron	Obadiah Marland	Boston, Mass	Mar. 21, 1854.
Sash-bolt, curved	E. G. Connelly	Indianapolis, Ind	Feb. 21, 1854.
Sash-fasteners	Henry B. Kimble	Rochester, N. Y	Mar. 7, 1854.
Sash-fasteners	Charles Merrill	Malden, Mass	Dec. 19, 1854.
Sash-sustainers	Geo. C. Hinman	New Haven, Conn	Mar. 7, 1854.
Sashes, window, securing	Alpheus Kimball	Fitchburg, Mass	Mar. 14, 1854.
Sashes, window, mode of balancing. (See Class IX.)			
Sashes, window, casting metal	Thomas J. Sloan	New York, N. Y	Dec. 5, 1854.
Saw-set	Oliver Lesley	Attica, Fountain county, Ind	Mar. 14, 1854.
Saws, mill, apparatus for filing	John Sheffield	Pultneyville, Wayne county, N. Y.	June 6, 1854.
Screw-bolts and nuts	Lucius Page	Cavendish, Vt	Jan. 3, 1854.
Screw-blanks, impressing the thread upon	Samuel McCormick	Dublin, Ireland	June 6, 1854. Patented in England Mar. 22, 1853.
Screw-blanks, machines for threading	Elliot Savage	Berlin, Ct	Nov. 21, 1854.
Screws in lathes, arrangement for cutting	Joseph Nason	New York, N. Y	Jan. 3, 1854.
Screws, threading, machines for	Geo. F. Wilson and James M. Whiting	Providence, R. I.	July 18, 1854. Patented in England April 4, 1854.
Screw-wrenches	Dexter H. Chamberlain	Boston, Mass	Mar. 21, 1854.
Screw-wrenches	Aury G. Coes	Worcester, Mass	July 4, 1854.
Screw-wrenches	Jabez C. Terry	Springfield, Mass	July 11, 1854.
Shovel-handles, machines for making	Russell D. Bartlett	Bangor, Penobscot county, Maine.	Mar. 14, 1854.
Shovel-handles, machine for making the heads of	Russell D. Bartlett	Bangor, Penobscot county, Maine.	July 11, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Shovel-handles, machine for making head part of	Elbridge Webber	Gardiner, Maine	Nov. 7, 1854.
Slag-ware, making	William G. Elliott	Blisworth, England	Sept 19, 1854. Patented in England Oct. 5, 1852.
Spike-machines, hanging of the griping-jaws of, in weighted levers.	James H. Swett	Pittsburg, Pa	Mar. 14, 1854.
Spike-machines	Fenton Humphrey	Boonton, Morris county, N. J	July 4, 1854.
Spring and spring-catch for closing doors, arrangement of.	John Clark	North Hadley, Mass	July 25, 1854.
Steel direct from the ore, process of making	George Hand Smith	Rochester, N. Y	July 18, 1854.
Tea-pots, casting the spouts of. (See Class XVII, letter S.)			
Tin foils, or sheets, manufacture of	John J. Crooke	New York, N. Y	Feb. 7, 1854.
Tire-bending machines	Robert L. Wright	Blue Rock, Chester county, Pa	May 23, 1854.
Tires for carriage-wheels	George Souther	South Boston, Mass	Aug. 1, 1854.
Tires, making car and other wheel	Alfred Krupp	Essen, Prussia	June 6, 1854.
Tool-handle	George W. Griswold	Carbondale, Pa	June 20, 1854.
Tool-holders	Dexter H. Chamberlain	Boston, Mass	Feb. 7, 1854.
Tool-holders	Elias Hall	Rutland, Vt	Feb. 7, 1854.
Tool-holders, operating catches in	John Allender	New London, Ct	May 2, 1854.
Tools, securing, to their handles	Anthony Vitally and Carl Kolb	Newark, N. J	June 13, 1854.
Tubes, making metal rods and	James Newman	Burmingham, England	Nov. 28, 1854. Patented in England March 23, 1854.
Tubes, making seamless metal	Jared Pratt	Taunton, Bristol county, Mass	June 6, 1854.
Tubes, rollers for scarfing the edges of skelps for, lap-welded.	James McCarty	Reading, Pa	Jan. 31, 1854.
Tubes, wrought-iron, heating skelps for the manufacture of.	James McCarty	Reading, Pa	April 4, 1854.
Tuyeres	George D. Miller	New Berlin, Pa	Jan. 3, 1854.
Vaults, safes, and bank, powder-channel to doors of.	F. C. Goffin, assignor to Alfred B. Ely	New York, N. Y	June 27, 1854.
Vault and safe-doors, attaching cross-bar fastenings to.	T. C. Goffin, assignor to A. B. Ely	New York, N. Y. Boston, Mass	Jan. 10, 1854.

Vises	Bernard Hughes	Rochester, N. Y.	June 13, 1854.
Vises, cast-iron	Charles Parker	Meriden, Conn.	June 20, 1854.
Vises or chucks for holding cylindrical bodies	Charles Gregg	Brooklyn, N. Y.	May 30, 1854.
Wire-netting, machines for making	John Nesmith	Lowell, Mass.	April 4, 1854.
Wire-rope, manufacturing	John A. Roebling	Trenton, N. J.	Nov. 21, 1854.
Wire-screens, weaving	Joseph M. Schuyler and William Zern, assignors to D. L. Easterly.	Pottsville, Pa.	Feb. 21, 1854.

Class III.—Manufactures of fibrous and textile substances, *including machines for preparing fibres of wool, cotton, silk, fur, paper, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Binding folder	John B. Nichols	Lynn, Mass.	Aug. 29, 1854.
Braiding machines	Jas. A. Bazin, assignor to	Canton, Mass.	Aug. 8, 1854.
	A. B. Ely	Boston, Mass.	
Braiding machines, Sacket's	Ephraim Titus, Emerson Sizer, and A. Halladay.	Westfield, Hampden county, Mass.	Mar. 28, 1854.
Carding machines, cleaning top cards of	Horace Woodman	Biddeford, Me.	Aug. 1, 1854.
Cards of carding engines, cleaning	Samuel Greene	Woonsocket, R. I.	Nov. 21, 1854.
Card-teeth machine	William Montgomery	Roxbury, Mass.	June 13, 1854.
Card teeth, machines for sticking	G. W. Coats & J. Russell	Springfield, Mass.	Aug. 1, 1854.
Carpets and rugs, manufacturing	John G. McNair	West Farms, N. Y.	Oct. 24, 1854.
Carpets, two-ply, manufacturing	Thomas Crossley	Boston, Mass.	Aug. 22, 1854; antedated Feb. 22, 1854.
Cloth, drying	Robert Preston	North Pownal, Vt.	Feb. 14, 1854.
Cloth, drying. (See Class V, letter D.)			
Cloth, drying	R. L. Hawes	Worcester, Mass.	Oct. 3, 1854.
Cloth, folding and measuring	William C. Wright	Boston, Mass.	June 20, 1854.
Cloth, fulling, machinery for	James H. Jennings & Thomas Brierly	Clayville, N. Y.	Jan. 24, 1854.
Cloth, machines for winding and folding	Thomas P. Forsythe	Dalton, Wayne county, Ia.	April 18, 1854.
Cloth, machinery for stretching and drying	Benjamin J. Tayman	Philadelphia, Pa.	Nov. 14, 1854.
Cloth, napping, machinery for	Joseph Weight	Lawrence, Essex county, Mass.	June 13, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Cloth on looms, mechanism for measuring	H. Halvorson, assignor to H. Halvorson & H. Barnes.	Boston, Mass	Aug. 1, 1854
Cloth, stretching and drying	D. & H. Stearns	Pittsfield, Mass	Feb. 21, 1854.
Cloths, &c., water-proofing	M. Jacob Lieberman, assignor to	Subject of the Emperor of Russia, at present residing in N Y.	Dec. 12, 1854.
	George S. Hanford & Co	New York, N. Y	
Cloth, tentering	Warren Shaw & Parley G. Green	Wales, Hampden county Mass	June 20, 1854.
Cordage, flexible	Harry H. Matteson	Buffalo, N. Y	Jan. 10, 1854.
Cordage machinery	Philos B. Tyler	Springfield, Mass	June 27, 1854.
Cordage, machinery for making	Rufus Porter, assignor to	Washington, D. C	Feb. 21, 1854.
	George Stephenson	Northfield, Boon county, Ia	
Cotton and other fibrous substances, cleaning	Julius C. Hurd	Medway, Norfolk county, Mass	April 18, 1854.
Cotton and other fibrous substances, machinery for picking.	Richard Kitson	Lowell, Mass	Oct. 31, 1854.
Cotton and other fibrous materials, combing	James Noble	Leeds, York, England	June 27, 1854.
Cotton, machinery for cleaning	Samuel W. Brown	Lowell, Mass	Oct. 24, 1854.
Cotton, machines for cleaning	Charles Leavitt, assignor to	Quincy, Adams county, Ill	April 11, 1854.
	S. C. Cockrill	Nashville, Tenn	
Cotton picker, cylinder	James Pitts.	Lancaster, Mass	Feb. 28, 1854.
Cotton spinning	John W Adams	Thompsonville, Conn	May 2, 1854.
Cotton thread, covering with wool	James Taylor	Newark, N. J	Dec. 5, 1854.
Cotton, throstles for spinning	Charles Danforth	Paterson, N. J	Dec. 12, 1854.
Felt garments, seamless, uniting bats for making.	D. W. Gitchell, assignor to John W. Wagstaff.	Rahway, N. J	Sept. 26, 1854.
Fibre, machinery for separating the, from the woody portion of tropical plants.	John Lilley	Birkenhead, England	Dec. 5, 1854. Patented in England July 21, 1853.
Fibre, vegetable, the preparation of	David A. Wells	Cambridge, Mass	April 4, 1854.
Flax and hemp dressing	Lewis S. Chichester	Brooklyn, N. Y	April 11, 1854.
Flax and hemp, machines for breaking	John Hind	Schenectady, N. Y	Sept. 5, 1854.
Flax, machinery for dressing	E. L. Norfolk	Salem, Essex county, Mass	May 9, 1854.
Flax, machinery for dressing	Daniel Warner, jr	South Hadley, Mass	Sept. 5, 1854.
Flax, machines for bleaching	J. A. Roth & J. Lea	Philadelphia, Pa	April 18, 1854. Patented in England Feb. 7, 1854.

Flax, picking and cleaning	A. H. Caryl	Sandusky City, Ohio	Feb. 14, 1854.
Flax, processes for bleaching	J. A. Roth & J. Lea	Philadelphia, Pa.	April 18, 1854. Patented in England May 26, 1853.
Flocks for felting, machines for preparing	Leander W. Boynton	South Coventry, Tolland county, Conn.	July 18, 1854.
Flyers	Edward C. Johnson	Lowell, Mass	Dec. 12, 1854.
Gin, cleaning seed cotton and feeding it to the	Major B. Clarke	Newnan, Geo	Dec. 19, 1854.
Gin, cotton, ribs	Israel F. Brown	Columbus, Geo	July 18, 1854.
Ginning and cleaning cotton	Cornelius Speer	New York, N. Y	Oct. 10, 1854.
Gins, cotton	L. S. Chichester	Brooklyn, N. Y	July 25, 1854.
Gins, cotton	Benjamin D. Gullett	Aberdeen, Miss	Jan. 10, 1854.
Gins, cotton	Leonard Campbell	Columbus, Miss	Jan. 10, 1854.
Goods, elastic. (See Class XVI, letter G.)			
Hackling corn husks	Wm. H Fullerton	Louisville, Ky	July 11, 1854.
Hair, treating for weaving	John Gledhill	New York, N. Y	Feb. 21, 1854.
Hat bodies, forming and hardening	A. Spencer & A. Loeschner	New York, N. Y	April 25, 1854.
Hat bodies, machinery for forming	Daniel Barnum	New York, N. Y	Oct. 17, 1854.
Hat bodies, machinery for making	Leander W. Boynton	South Coventry, Conn	Oct. 10, 1854.
Hat bodies, machinery for making	Isaac Searle	Newark, N. J	Nov. 7, 1854.
Hat bodies, making	Andrew Rankin	Newark, N. J	Oct. 3, 1854.
Hats and hat bodies, machinery for felting	John Baptiste Laville	Paris, France	Sept. 26, 1854. Patented in France Aug. 20, 1852.
Hats, felt. (See Class XXI.)			
Hats, finishing palm-leaf	Dexter Dennis	Barre, Worcester county, Mass.	July 4, 1854; antedated Jan. 4, 1854.
Heddle eyes, wire, machines for making	Thos. Clegg, assignor to Clegg & Stevens	Andover, Mass	July 11, 1854.
Heddles for looms, machines for casting metallic eyes or mails of.	Jacob Senneff	Philadelphia, Pa	Aug. 22, 1854.
Heddles, weavers'	Jacob Senneff	Philadelphia, Pa	July 18, 1854.
Hemp and flax, machinery for softening	Robert Boyack	Poughkeepsie, N. Y	Oct. 24, 1854.
Hemp, process for treating. (See Class IV, letter P.)			
Hemp rotting processes. (See Class IV, letter P)			
Knitting-machines	Israel M. Hopkins	Pascoag, Providence county, R. I.	May 16, 1854.
Knitting-machines	Henry Burt, assignor to Newark Patent Hosiery Company.	Newark, N. J	May 16, 1854.
Knitting-machines	John H. Barsanter	Philadelphia, Pa	May 30, 1854.
Knitting-machines	Elias M. Ray	Providence, R. I.	May 30, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Knitting-machines	Brown S. Wood	Burrillville, Providence county, R. I.	June 6, 1854.
Knitting-machines	Newark Patent Hosiery Company, assignee of Henry Burt.	Newark, N. J	July 4, 1854.
Knitting-machines	George Jackson	Cohoes, N. Y	Aug. 22, 1854.
Knitting-machines	Joseph A. Corwin	Newark, N. J	Sept. 26, 1854.
Knitting-machines	James Y. Leslie	Cincinnati, Ohio	Oct. 3, 1854.
Knitting-machines	Joseph Hollen	White Township, Pa	Nov. 28, 1854.
Knitting-machines	John Pepper, jr., assignor to the Franklin Mills.	Portsmouth N. H	Dec. 5, 1854.
Loom-beams	Samuel T. Thomas and Eliza Ann Everett, administratrix of E. Everett.	Lawrence, Mass	Nov. 7, 1854.
Loom for weaving cut-pile fabrics	E. B. Bigelow	Clinton, Mass	Oct. 17, 1854. Patented in England Dec. 31, 1851.
Loom, harness, clasps for	George Copeland	Danville, Maine	Sept. 26, 1854.
Looms	George Yates and Eli Clayton	Lancaster, Pa	June 13, 1854.
Looms	Edward W. Brown	Fall River, Mass	July 25, 1854.
Looms	Joseph Welsh	Philadelphia, Pa	Oct. 3, 1854.
Looms	Stephen C. Mendenhall	Richmond, Ind	Oct. 10, 1854.
Looms	Barton H. Jenks	Bridesburg, Pa	Oct. 24, 1854.
Looms	George Roth	New York, N. Y	Dec. 12, 1854.
Looms, fancy check	Enoch Burt	Manchester, Conn	Jan. 24, 1854.
Looms for weaving bags	William Talbot	Sanford, Maine	Nov. 28, 1854.
Looms for weaving figured fabrics	George Crompton	Worcester, Mass	Nov. 14, 1854.
Looms operating by electricity	Gaetan Bonelli	Turin, Kingdom of Sardinia	Dec. 12, 1854. Patented in France Aug. 15, 1853.
Looms, rollers for pattern-chains for	George Crompton and M. A. Furbush	Worcester, Mass	Nov. 14, 1854.
Looms, power	John Shuttleworth	Frankfort, Pa	Jan. 3, 1854.
Looms, power	Joseph T. Barnes	Manayunk, Pa	Oct. 17, 1854.
Looms, power, shuttle-guards for	Peter Miggett	Hoosick Falls, N. Y	Aug. 8, 1854.
Looms, wire heddle-eyes for	Thomas Clegg, assignor to Thomas Clegg and Nathaniel Stevens.	North Andover, Essex county, Mass.	Mar. 7, 1854.
Mules, self-acting	Wanton Rouse	Taunton, Mass	Oct. 3, 1854.

Mules, self-acting roller, catch for	Mark R. Pearson, assignor to Mark R. Pearson and Samuel Shaw.	Georgetown, Mass	Oct. 24, 1854.
Paper and other purposes, treating cane-fibre for.	B. A. Lavender and Henry Lowe	Baltimore, Md	April 4, 1854.
Paper from wood, manufacture of	Charles Watt and Hugh Burgess	London, England	July 18, 1854. Patented in England Aug. 19, 1853.
Paper, machinery for cutting	Nelson Gavitt	Philadelphia, Pa	May 9, 1854.
Paper, machinery for cutting rags for making.	Alonzo S. Woodward Benjamin F. Bartlett	Lowell, Mass. Pepperell, Middlesex Co., Mass.	Oct. 31, 1854.
Paper, machinery for polishing	E. L. Perkins	Roxbury, Mass	Oct. 24, 1854.
Paper-making machinery	Obadiah Marland	Boston, Mass	Dec. 5, 1854. Patented in England Sept. 28, 1854.
Paper-making machinery	Obadiah Marland	Boston, Mass	Dec. 5, 1854. Patented in England Sept. 28, 1854.
Paper, making thick	Samuel G. Levis	Delaware county, Pa	Feb. 14, 1854.
Paper, thick, drying. (See Class V, letter D.)			
Picker, cylinder tooth, clothing for	Robert Heneage	Lowell, Mass	Oct. 31, 1854.
Reeling machines	George Levan	Lancaster county, Pa	Mar. 7, 1854.
Ribbon of strips of cloth, making	Augustus M. Eastman	New York, N. Y	Sept. 5, 1854.
Rope and cordage, machinery for making	Arad Woodworth, 3d George Chamberlain	Boston, Mass. Olean, N. Y.	Nov. 28, 1854.
Rope and cordage, machinery for making	J. Harris, J. B. Stott, and G. Richmond	Lansingburg, N. Y	Oct. 31, 1854.
Rope and cordage, spinning	Jesse Carpenter	New York, N. Y	Oct. 10, 1854.
Rope, machinery for laying	Stephen and James A. Bazin	Canton, Norfolk county, Mass.	April 25, 1854.
Rope, machinery for making	William Robinson, jr	Warsaw, Wyoming county, N. Y.	May 2, 1854.
Rope wire, manufacturing. (See Class II, letter W.)			
Roving tubes	Moses Sargent, jr	Meredith, N. H	Oct. 17, 1854.
Scouring piece goods, machines for	J. Augustus Roth and Joseph Lea	Philadelphia, Pa	July 18, 1854. Patented in England Feb. 7, 1854.
Self-acting mules for spinning	Geo. Wright	New England Village, Worcester county, Mass.	July 11, 1854.
Sewing-machines	Christopher Hodgkins, assignor to N. Hunt	Boston, Mass	Mar. 7, 1854.
Sewing-machines	Charles Miller	St. Louis, Mo	Mar. 7, 1854.
Sewing-machines	Wm. Wickersham	Boston, Mass	Mar. 7, 1854.
Sewing-machines	Wm. H. Johnson	Granville, Mass	Mar. 7, 1854.
Sewing-machines	James Harrison, jr	Milwaukie, Wis	April 11, 1854.
Sewing-machines	Samuel J. Parker	Ithaca, N. Y	April 11, 1854.
Sewing-machines	Isaac M. Singer	New York, N. Y	May 2, 1854.

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Sewing-machines	Otis Avery	Honesdale, Wayne county, Pa.	May 9, 1854.
Sewing-machines	Simeon Coon	Ithaca, Tompkins county, N. Y.	May 9, 1854.
Sewing-machines	Heman Crosby, jr.	Watertown, Litchfield co., Conn.	May 9, 1854.
Sewing-machines	Christopher Hodgkins, assignor to N. Hunt.	Boston, Mass.	May 9, 1854.
Sewing-machines	Isaac M. Singer	New York, N Y.	May 30, 1854.
Sewing-machines	Isaac M. Singer	New York, N. Y.	May 30, 1854.
Sewing-machines	M. W. Stevens and E. G. Kingsley	Stoughton, Norfolk county, Mass.	May 30, 1854.
Sewing-machines	Walter Hunt	New York, N. Y.	June 27, 1854.
Sewing-machines	William Butterfield and Edgar M. Stevens, assignees of William Butterfield.	Boston, Mass.	July 4, 1854.
Sewing-machines	Nehemiah Hunt, assignee of Geo. A. Leighton.	Boston, Mass.	July 11, 1854.
Sewing-machines	Alfred Swingle, assignor to Elmer Townsend.	Boston, Mass.	Aug. 8, 1854.
Sewing-machines	Sylvester H. Roper	Worcester, Mass.	Aug. 15, 1854.
Sewing-machines	Edmund Shaw	East Abington, Mass.	Aug. 22, 1854.
Sewing-machines	Sidney S. Turner, assignor to Elmer Townsend.	Westborough, Mass.	Aug. 22, 1854.
Sewing-machines	Sidney S. Turner, assignor to Elmer Townsend.	Westborough, Mass.	Aug. 29, 1854.
Sewing-machines	Philander Shaw	Abington, Mass.	Sept. 12, 1854.
Sewing-machines	Daniel C. Ambler	New York, N. Y.	Nov. 7, 1854.
Sewing-machines	Daniel Harris, assignor to John P. Bowker, jr.	Boston, Mass.	Nov. 14, 1854.
Sewing-machines	Charles Parham	Philadelphia, Pa.	Nov. 21, 1854.
Sewing-machines	Theodore E. Weed	Williamsburg, N. Y.	Nov. 28, 1854.
Sewing-machines	Thomas J. W. Robertson, assignor to T. J. W. Robertson and N. E. Beach.	Brooklyn, N. Y.	Nov. 28, 1854.
Sewing-machines	William Lyon, assignor to F. and G. Simpson, B. Dodd, and C. B. Merriman.	Newark, N. J.	Dec. 12, 1854.
Sewing-machines	George W. Stedman	Vienna, N. J.	Dec. 12, 1854.
Sewing-machines	W. P. N. Fitzgerald, assignee of Allen B. Wilson.	Watertown, Conn.	Dec. 19, 1854.
Sewing-machines, binding guides for	Osgood G. Boynton, assignor to	Haverhill, Mass.	Nov. 28, 1854; antedated June 1, 1854.
	Nehemiah Hunt	Boston, Mass.	
Sewing-machines, clamps for	Melvin Shaw, assignor to Melvin Shaw and Daniel G. Wheeler.	East Abington, Mass.	Aug. 22, 1854; antedated Feb. 22, 1854.

Sewing-machines, cops for	Wm. H. Akins, assignor to Samuel J. Parker.	Ithaca, N. Y.	April 4, 1854.
Sewing-needles	John Wilcox and S. H. Whitridge	Philadelphia, Pa.	Oct. 3, 1854.
Speeders, counter-twist	Jesse Whitehead	Manchester, Va.	Aug. 29, 1854.
Speeders, stop-motion for	Lewis Cutting	Lowell, Mass.	Aug. 8, 1854.
Spinning-frames	William Perry	Graniteville, S. C.	Nov. 21, 1854.
Weaving cut-pile fabrics	Thomas Crossley	Boston, Mass.	June 6, 1854.
Weaving double cloth	Samuel Fay	Lowell, Mass.	June 20, 1854.
Winding rope, cord, or yarn	Philos B. Tyler	Springfield, Mass.	July 18, 1854.
Wool, combing, machinery for	Charles G. Sargent	Lowell, Mass.	Aug. 15, 1854.
Wool, machine for cleaning	Lewis S. Chichester	Brooklyn, N. Y.	Feb. 14, 1854.
Wool, machinery for combing	Charles G. Sargent	Lowell, Mass.	May 16, 1854.
Wool, machines for cleaning	Leander W. Boynton	South Coventry, Conn	Sept. 12, 1854.
Wool, spinning, machinery for	Edmund Victory, assignor to D. M. Linsley and G. Goulding.	Watertown, Jefferson county, N.Y.	June 13, 1854.
Yarn, spooling from the cop	Smith Thompson	Newburyport, Mass.	Feb. 21, 1854.
Yarns, warping and dressing	S. T. Thomas and E. A. Everett, administrators of Edward Everett, deceased.	Lawrence, Mass.	Aug. 1, 1854.

CLASS IV.—CHEMICAL PROCESSES, MANUFACTURES, AND COMPOUNDS, *including medicines, dyeing, color-making, distilling, soap and candle making, mortars, cements, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Acid, sulphuric, manufacture of	D. E. Contaret	Roxbury, Norfolk county, Mass.	June 13, 1854; patented in England Dec. 16, 1853.
Archil, the preparation of	Jonas Eberhart	Schuylkill Falls, Philadelphia county, Pa.	June 27, 1854.
Bleaching apparatus	J. A. Roth & J. Lea	Philadelphia, Pa.	May 9, 1854; patented in England Feb. 7, 1854.
Bleaching flax, machines for. (See Class III, F.)			
Bleaching flax, processes for. (See Class III, F.)			
Candle-mould apparatus	Willis Humiston	Troy, N. Y.	April 4, 1854.
Camphor wash mixtures	C. W. Crozier	Knoxville, Tenn	July 11, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Cement compounds	William H. Poindexter, administrator of John R. Remington.	Fayette county, Tenn	July 4, 1854.
Cement of boiled coal, tar, and earths	H. P. Gengembre	Alleghany City, Pa	July 11, 1854.
Chlorine, compounds for neutralizing	E. N. Horsford	Cambridge, Mass	Oct. 10, 1854.
Compositions for coating telegraphic wires, and for other purposes.	Thomas, Earl of Dundonald	Belgrave Road, Middlesex county, England	June 13, 1854; patented in England Oct. 6, 1852.
Distilling apparatus	Carl E. Werner	New Castle, Illinois	Jan. 24, 1854.
Distilling apparatus	Halvor Halvorson, assignor to H. Halvorson and J. T. Heard.	Boston, Mass	May 2, 1854.
Distilling and condensing apparatus	James R. Stafford	Brooklyn, N. Y.	April 25, 1854.
Distilling fatty bodies, stills for	Samuel Childs	New York, N. Y.	June 13, 1854.
Dyeing apparatus	Charles T. Appleton	Roxbury, Norfolk county, Mass.	Mar. 21, 1854; patented in England Jan. 7, 1854.
Dyeing processes	Charles T. Appleton	Roxbury, Mass	May 30, 1854.
Dyeing, processes for	Charles T. Appleton	Roxbury, Mass	Mar. 21, 1854.
Evaporators, milk and other	A. F. Dalson	New York, N. Y.	June 27, 1854.
Evaporators, salt, construction of	Henry G. Bulkley	Kalamazoo, Mich	July 4, 1854.
Fires, compounds for extinguishing	Ralph Bulkley	New York, N. Y.	Mar. 21, 1854.
Gas and liquid regulators	Thomas H. Dodge	Nashua, N. H.	June 27, 1854.
Gas, dry meters	Franklin Darracott, assignor to George Darracott.	Boston, Mass	Dec. 5, 1854.
Gas generators	N. Aubin	Albany, N. Y.	Sept. 26, 1854.
Gas generators, wood	William D. Porter	New York, N. Y.	Aug. 22, 1854.
Gas, illuminating, from wood, process for making	William P. McConnell	Washington, D. C.	Sept. 26, 1854.
Gas meters and regulators	Charles C. Lloyd	West Philadelphia, Pa.	June 20, 1854.
Gas meters, movement of	Joseph Thatcher	Philadelphia, Pa.	Oct. 3, 1854.
Gas retorts, coating in	Adrian R. Terry	Detroit, Mich.	June 20, 1854.
Gas retorts, form of	Charles M. Cresson	Philadelphia, Pa.	Oct. 3, 1854.
Gums, vulcanizing elastic	E. E. Marcy	New York, N. Y.	Nov. 7, 1854.
Gums, vulcanizable, treating	Charles Goodyear	New Haven, Conn	April 4, 1854.
Gums, vulcanizable, treating caoutchouc and other.	L. O. P. Meyer	Newtown, Conn	April 4, 1854.

Gutta percha and like gums, desulphurizing ...	William E. Rider and John Murphy	New York, N. Y.	Nov. 7, 1854.
Gutta percha, processes for treating	John Murphy	New York, N. Y.	May 30, 1854.
Gutta percha, stereotype composition	(See S, Class XVIII.)		
India rubber, processes for treating	E. D. S. Goodyear, assignor to New York India Rubber Company.	Stapleton, N. Y.	Mar. 28, 1854.
India rubber and other gums, vulcanizing	L. O. P. Meyer	Newtown, Conn	Feb. 28, 1854.
India rubber, manufacture of	Daniel Hayward	Providence, R. I.	Aug. 29, 1854.
India rubber overshoes	Julius A. Pease	New York, N. Y.	Nov. 14, 1854.
Kerosene burning fluids, "A"	Abraham Gesner, assignor to the Asphalte Mining & Kerosene Gas Company.	New York, N. Y.	June 27, 1854.
Kerosene burning fluids, "B"	Abraham Gesner, assignor to the Asphalte Mining & Kerosene Gas Company.	Williamsburg, N. Y.	June 27, 1854.
Kerosene burning fluids, "C"	Abraham Gesner, assignor to the Asphalte Mining & Kerosene Gas Company.	Williamsburg, N. Y.	June 27, 1854.
Kettles, for calcining plaster of paris	Jerome B. King	New York, N. Y.	Nov. 21, 1854.
Lampblack, manufacture of	Wm. G. W. Jaeger	Baltimore, Md.	July 18, 1854.
Lubricating apparatus. (See Class XII.)			
Lubricating compound. (See Class XII.)			
Lubricating material. (See Class XII.)			
Lubricator. (See Class XII.)			
Lubricator. (See Class XII.)			
Malt kilns, floor-plates of	Matthew Stewart	Philadelphia, Pa.	Jan. 3, 1854.
Matches, friction, machinery for making	Wm. Gates, jr.	Frankfort, N. Y.	April 4, 1854.
	H. J. Harwood	Utica, N. Y.	
Matches, machinery for making	Elkan Adler	New York, N. Y.	Aug. 1, 1854.
Match-frames, machine for filling	Wm. Gates, jr	Frankford, N. Y.	Oct. 31, 1854.
Match-frames, machine for filling	Anthony Sohn	Monroeville, Huron county, Ohio.	April 18, 1854.
Oil, rosin, lamps. (See L, Class V.)			
Oil, rosin, processes for distilling	Halvor Halvorson, assignor to H. Halvorson and J. T. Heard	Boston, Mass	May 2, 1854.
Oils, purifying	Thomas Drayton, assignor to	Brooklyn, N. Y.	July 4, 1854.
	George W. McCready	New York, N. Y.	
Paint, compositions	Gabriel Blondin	New York, N. Y.	June 20, 1854.
Paints, processes for treating	Gabriel Blondin	New York, N. Y.	June 20, 1854.
Parti-coloring machines	Sol. Smith, assignor to S. Smith & Wm. Shoaler	Acton, Middlesex county, Mass.	Feb. 21, 1854.
Pigments, manufacturing from iron ore	Joseph H. Davis	Morristown, N. J.	Aug. 8, 1854.
Pill machine	Loriston G. Merrell	New Bedford, Pa.	Jan. 17, 1854.
Powder, impalpable, for paints, process of separating.	George W. Griswold	Carbondale, Luzerne county, Pa.	July 18, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Processes for enamelling iron	C. F. Thomin and C. Stumer	Cincinnati, Ohio	Oct. 17, 1854.
Processes for purifying fatty bodies	R. A. Tilghman	Philadelphia, Pa	Oct. 3, 1854.
Processes for treating hemp	Lewis C. Suggert	Springdale, Scott county, Ky	May 22, 1854.
Processes, hemp rotting	William Watt	Glasgow, Great Britain	Nov. 21, 1854. Patented in England May 22, 1852.
Processes of galvanizing metals	Christian B. Miller	Wilmington, Del	May 30, 1854.
Processes of treating the mother-water of salines.	Edward Stieren	Tarentum, Pa	Dec. 12, 1854.
Process of imitating marble and other substances.	William Bonney	New York, N. Y	Aug. 8, 1854.
Process of treating vegetable fibre	Jonathan Knowles	Trenton, N. J	Feb. 14, 1854. Patented in France April 4, 1853.
Salt, apparatus for the manufacture of	Samuel B. Howd, assignor to Thos. F. Davis, James S. Leach, and Richard F. Stevens.	Syracuse, N. Y	Oct. 10, 1854.
Salt kilns	John P. Conger	Newark, N. J	Feb. 28, 1854.
Soap compounds	T. C. Taylor	Camden, N. J	June 13, 1854. Patented in England Sept. 17, 1853.
Soap, manufacturing processes	T. C. Taylor	Camden, N. J	June 13, 1854.
Stone, applying colors to	Hiram Tucker, assignor to H. Tucker and Joseph Story.	Cambridgeport, Middlesex county, Mass.	Feb. 21, 1854. Patented in England Sept. 24, 1853.
Sugar-boilers, construction of	Edward J. Woolsey	Astoria, N. Y	Oct. 10, 1854.
Sugar-making apparatus, construction of	Louis A. Gossin	Thibodeaux, La	Oct. 10, 1854.
Sugar-moulds, making	James Myers, jr	New York, N. Y	Dec. 19, 1854.
Tallow, process for hardening	Charles Schinz	Camden, N. J	June 13, 1854.
Varnishes, processes for making	Jonathan Burrage, assignor to J. Burrage and F. W. Newton.	Roxbury, Mass	Mar. 14, 1854.
Vinous fermenting in close vessels	A. Harvie and C. Guild	Cincinnati, Ohio	April 25, 1854.
Zinc, white, furnaces	James Renton	Newark, N. J	Feb. 28, 1854.
Zinc, white, furnaces for	Jonathan G. Trotter	Newark, N. J	Mar. 28, 1854.
Zinc, white, furnaces for making	John E. Burrows	Newark, N. J	Nov. 7, 1854.
Zinc, white, making	Richard Jones	Burlington county, N. J	Mar. 28, 1854.

CLASS V.—CALORIFICS, *comprising lamps, fire places, stoves, grates, furnaces for heating buildings, cooking-apparatus, preparation of fuel, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Air-heating pipes, connecting the joints of.....	Jesse Young.....	Franklin Furnace, Ohio.....	Mar. 7, 1854.
Burning fluids, kerosene, A, B, and C. (See Class IV, letter K.)			
Candlesticks, sheet metal.....	J. W. Smith.....	Poultney, Vt.....	July 25, 1854.
Chimney-caps.....	John Clark.....	Washington, D. C.....	Sept. 5, 1854.
Coal-hods.....	William Nelson Martin.....	Bristol, R. I.....	Nov. 7, 1854.
Coal-sifter.....	Elisha French.....	Braintree, Mass.....	July 11, 1854.
Cooking and warming, apparatus for.....	Daniel Willis.....	New York, N Y.....	July 25, 1854.
Drying cloth.....	D. W. Kennedy.....	Staunton, Augusta county, Va....	June 27, 1854.
Drying flour.....	H. Ely, assignor to S. P. Ely.....	Rochester, N. Y.....	June 6, 1854.
Drying grain.....	S. B. Robinson.....	Oswego, N. Y.....	June 20, 1854.
Drying thick paper.....	E. and J. R. Cushman.....	Amherst, Mass.....	Aug. 1, 1854.
Dust, excluding, from railroad cars.....	O. Newton and J. A. Crever.....	Pittsburg, Pa.....	Mar. 14, 1854.
Dust, preventing, from entering railroad cars..	Daniel S. Darling.....	Brooklyn, N. Y.....	Jan. 10, 1854.
Fan-blower.....	Solomon W. Ruggles, assignor to S. W. Ruggles and A. R. Smith.	Fitchburg, Mass.....	Aug. 8, 1854.
Fans, exhaust.....	J. Vaughan Merrick.....	Philadelphia, Pa.....	June 13, 1854.
Fire, method of extinguishing, in inaccessible places.	Amasa Stone.....	Philadelphia, Pa.....	Dec 5, 1854.
Fire-places, metallic.....	John F. Snyder.....	Culpeper, Va.....	July 18, 1854.
Furnace, air heating.....	Walter Bryent, assignor to John B. Kelsey...	Boston, Mass.....	Oct. 24, 1854.
Furnace grate bars.....	B C. Vanluzen, assignor to J. B. Martin and B. C. Vanduzen.	Cincinnati, Ohio.....	May 30, 1854.
Furnace, hot-air.....	Peter Sweeney.....	Buffalo, N. Y.....	July 11, 1854.
Furnace, hot-air.....	Nathaniel A. Boynton.....	New York, N. Y.....	Aug. 22, 1854.
Furnace, hot-air.....	Daniel P. Weeks.....	Malden, Mass.....	Dec. 12, 1854.
Furnace of hot water, apparatus for regulating the.	Thomas T. Tasker.....	Philadelphia, Pa.....	Dec. 5, 1854.
Furnace, soldering.....	William J. Stevenson.....	New York, N. Y.....	Oct. 31, 1854.
Furnaces.....	John Lee Stevens.....	Kennington, England.....	Nov. 21, 1854. Patented in England Oct. 1, 1852.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Furnaces, air-heating	Charles R. Harvey	New York, N. Y.	Jan. 24, 1854.
Furnaces for heating buildings	Joseph Leeds	Philadelphia, Pa.	Nov. 7, 1854.
Furnaces for zinc, white. (See Class IV, letter Z.)			
Furnaces, hot-air	Thomas W. Chatfield	Utica, N. Y.	Mar. 28, 1854.
Furnaces, hot-air	John P. Hayes	Philadelphia, Pa.	May 23, 1854.
Furnaces, hot-air	John Carton and Jos. Briggs	Utica, N. Y.	Aug. 1, 1854.
Furnaces, hot-air	John E. Grant, assignor to Cyrus Carpenter and A. D. Shaw	Charlestown, Mass. Boston	Oct. 3, 1854.
Furnaces, means for directing the blast in	B. H. Washington	Hannibal, Mo.	Nov. 7, 1854.
Furnaces, operating dampers of	Daniel Treadwell, assignor to H. H. and F. H. Stimpson	Cambridge, Mass. Boston, Mass.	Aug. 22, 1854.
Furnaces, zinc, white. (See Class IV, letter Z.)			
Gas-burners	John Webster and O. Spencer, assignors to John Webster.	Cleveland, Ohio	Feb. 14, 1854.
Gas-burners	William Mallerd	Brooklyn, N. Y.	June 27, 1854.
Gas-burners, regulator for	William Mallerd	Brooklyn, N. Y.	June 27, 1854.
Gas-burners, regulator for	Andrew Mayer	Philadelphia, Pa.	Sept. 12, 1854.
Gas-heating apparatus	Charles M. Guild	Brooklyn, N. Y.	July 11, 1854.
Gas, heating, warming and cooking by	William Boggett and G. B. Pettit	Westminster, England	April 18, 1854. Patented in England Oct. 22, 1851.
Gas-regulators	Basil Dixwell and James A. Dorr	New York, N. Y.	April 18, 1854.
Grate-bars	Samuel Vansyckel	Little York, N. J.	Oct. 31, 1854.
Grates	George W. Griswold	Carbondale, Pa.	July 25, 1854.
Heaters, hydraulic	William H. Churchman	Philadelphia, Pa.	May 2, 1854.
Heaters, hydraulic	L. W. Leeds and R. M. Smith	Philadelphia, Pa.	May 16, 1854.
Heat, generator and radiator	Gardner Chilson	Boston, Mass.	Sept. 26, 1854.
Heating purposes, ordinary and super-heated steam combined for.	Charles E., and John and Samuel Wethered	Baltimore, Md.	June 20, 1854.
Heat, method of applying to dilate gases for the purpose of elevating water. (See W, Class XI.)			

Hot water apparatus	John Brown	New York, N. Y	May 30, 1854.
Hot water apparatus, double cylinder boilers for	William Beebe	New York, N. Y	Nov. 14, 1854.
Hot water apparatus, hydrometric regulator for	Joel H. Ross	New York, N. Y	Dec. 12, 1854.
Lamp-caps	William Bell	Boston, Mass	Nov. 14, 1854.
Lamp-fastenings	L. B. Carpenter	Buffalo, N. Y	July 25, 1854.
Lamp-filers	C. R. Landmann	New York, N. Y	Aug. 29, 1854.
Lamp, locomotive	Irvin A. Williams	Utica, N. Y	Oct 10, 1854.
Lamp, safety	Charles R. Landmann	Newark, N. J	Sept. 26, 1854.
Lamps	Joseph Harris, jr	Boston, Mass	Aug. 15, 1854.
Lamps	Isaac Vanbunshoten	New York, N. Y	Nov. 21, 1854.
Lamps, lard	Ira Smith and J. Stonesifer	Boonsboro, Md	Aug. 8, 1854.
Lamps, lard	Dexter H. Chamberlain, assignor to Wm. R. Meshurul.	Boston, Mass	Aug. 29, 1854.
Lamps, railway	Leroy S. White, assignor to L. S. White	Chicopee, Mass	Sept. 5, 1854.
	Lewis White	Hartford, Conn	
	Lyman White	Springfield, Mass	
	A. G. Stevens	Manchester, N. H	
Lamps, rosin oil	Silas Constant	Brooklyn, N. Y	Jan. 24, 1854.
Lamps, rosin oil	Silas Constant	Brooklyn, N. Y	Aug. 8, 1854.
Lamps, rosin oil	Isaac Pitman	Reading, Mass	Sept. 19, 1854.
Lamps, street, gas	Wm. A. Shaw and George Parker	Boston, Mass	April 11, 1854.
Lamps, torch	Harvey Brewer	East Boston, Mass	Jan. 10, 1854.
Lanterns	Andrew Lanergan	Boston, Mass	July 11, 1854.
Lanterns	Wm. D. Titus	Brooklyn, N. Y	Dec. 5, 1854.
Lanterns, combining foot-stoves and	Francis Arnold	Hartford, Conn	April 11, 1854.
Lanterns, fastening	Charles Monnin and Wm. M. Booth	Buffalo, N. Y	Aug. 1, 1854.
Lanterns, fastening lamps in	Emile Sirrett	Buffalo, N. Y	Oct. 24, 1854.
Lanterns, glass	P. A. Morley, assignor to James Bright	Brooklyn, N. Y	Aug. 29, 1854.
Lanterns, securing glasses in	Hugh Sangster	Buffalo, N. Y	Aug. 22, 1854
Lanterns, securing lamps to	Wm. Porter, assignor to	Williamsburg, N. Y	Oct. 24, 1854.
	Joseph N. Howe	Boston, Mass	
Lens, lamp, chimney	Silas Constant	Brooklyn, N. Y	June 13, 1854.
Matches. (See Class XXII.)			
Oven, elevated	James C. Keneredy	Albany, N. Y	July 11, 1854.
Oven, for baking	G. S. Blodgett and P. T. Sweet	Burlington, Vt	Dec. 5. 1854.
Ovens	Francis C. Treadwell, jr	New York, N. Y	Aug. 22, 1854.
Ovens, damper for	John P. Sherwood	Fort Edward, N. Y	Oct. 10, 1854.
Radiators	John Gemmil	Mercer county, Pa	Aug. 8, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Range, cooking	D. Donovan, administrator of W. G. Hallman, and D. Donovan, assignor to Henry J. White.	Philadelphia, Pa	June 6, 1854.
Range, hot-air, and side ovens	John H. Cahill	Philadelphia, Pa	Aug. 15, 1854.
Range, oven, cooking	Daniel P. Weeks	Malden, Mass	Dec. 19, 1854.
Register, hot-air	Edward A. Tuttle	Williamsburg, N. Y	Jan. 3, 1854.
Sewers, ventilating	Enoch Thorn	Philadelphia, Pa	June 27, 1854.
Spark arresters	Casimer Abos	New Brunswick, N. J	June 13, 1854.
Spark arresters	G. B. Simonds Abel Breaer	New Haven, Conn Saugatuck, Conn	June 13, 1854.
Stove regulators	W. Race, assignor to H. C. Silsby and W. Race.	Seneca Falls, N. Y	July 25, 1854.
Stovepipes, thimbles for	D. Wilson, assignor to W. F. Pratt, G. W. Bosworth, and H. M. Bird.	Milford, N. H	July 25, 1854.
Stove, rotary, arrangement of dampers in	William W. Hill	Greenport, Suffolk county, N. Y	June 6, 1854.
Stove, rotary, cooking	Elias A. Hibbard	Winchester, Va	Nov. 28, 1854.
Stove, smoke-consuming	E. A. Hill	Joliet, Ill	Oct. 17, 1854.
Stoves	Dennis G. Littlefield	Lowell, Mass	Jan. 24, 1854.
Stoves	Oron W. Wade	Versailles, N. Y	Oct. 24, 1854.
Stoves	Jordan L. Mott	Mott Haven, N. Y	Nov. 28, 1854.
Stoves; air-heating	Nathaniel A. Boynton	New York, N. Y	Aug. 8, 1854.
Stoves and ranges, cooking	James McGregor, jr	Troy, N. Y	Sept. 12, 1854.
Stoves, cooking	Joseph Leeds	Philadelphia, Pa	Mar. 28, 1854.
Stoves, gas	Andrew Mayer	Philadelphia, Pa	July 11, 1854.
Valve, float, for discharging condensed water	Caleb C. Walworth	Boston, Mass	Jan. 10, 1854.
Valve, steam-engine	Charles Rumley	Rochester, N. Y	Nov. 7, 1854.
Ventilating railroad cars	George Neilson	Boston, Mass	Jan. 24, 1854.
Ventilating railroad cars	George F. Foote	Buffalo, N. Y	July 11, 1854.
Ventilating railroad cars	C. Reed and B. K. Mould	Chicago, Ill	Aug. 8, 1854.
Ventilating ship timbers	J. L. Harley and Samuel Maxwell	Baltimore, Md	Sept. 12, 1854.
Ventilating window for railroad cars	George Neilson	Boston, Mass	May 30, 1854.
Ventilator, railroad car	John Bevan	Jersey City, Hudson county, N. J.	June 13, 1854

Ventilator, ships	Warren Robinson	New Haven, Conn	Feb. 14, 1854.
Ventilator, ship	Willet Thompson	New Haven, Conn	July 11, 1854.
Warming houses by steam	Stephen J. Gold	New Haven, Conn	Oct. 3, 1854.

CLASS VI.—STEAM AND GAS ENGINES, *including boilers and furnaces therefor, and parts thereof.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Boiler, alarms, steam	Patrick Clark	Rahway, N. J	Dec. 5, 1854.
Boiler, steam	Will E. Bird	Cahawba, Dallas county, Ala	July 18, 1854.
Boiler, steam	Henry Jackson	Fairmount, Ohio	July 25, 1854.
Boiler, steam, furnaces	F. P. Dimpfel	Philadelphia, Pa	Jan. 3, 1854.
Boiler tubes, steam	Richard C. Bristol	China, St. Clair county, Mich	Aug. 1, 1854.
Boilers, setting of steam	D. C. Ambler	New York, N. Y	June 20, 1854.
Boilers, means for preventing the explosion of	Abner W. Jones	New York, N. Y	Aug. 22, 1854.
Boilers, steam, furnace of	Jonathan Amory and William P. Parrott	Boston, Mass	June 27, 1854.
Boilers, steam	Peter Sweeny	Buffalo, N. Y	June 13, 1854.
Boilers, steam	James Wightman	Pittsburg, Pa	June 13, 1854.
Boilers, steam	Thomas Greer	Philadelphia, Pa	July 4, 1854.
Boilers, steam	Daniel B. Martin	Washington, N. J	Nov. 28, 1854.
Boilers, steam	John A. Roebling	Trenton, N. J	Dec. 5, 1854.
Boilers, steam, apparatus for indicating the action of the feed-pump to.	Thomas J. Sloan	New York, N. Y	Jan. 17, 1854.
Boilers, steam, arrangement of fusible plugs or discs for.	William Burnett	Boston, Mass	Mar. 7, 1854.
Boilers, steam, apparatus for regulating the supply of feed-water to.	Amos Jacobs	Ithaca, Tompkins county, N. Y	May 23, 1854.
Boilers, steam, feed-water apparatus for	Benaiah Fitts	Worcester, Mass	Mar. 28, 1854.
Boilers, steam, feed-water apparatus to	Henry C. Sergeant	Cincinnati, Hamilton county, Ohio	June 14, 1854.
Boilers, steam, feed-water apparatus to	Benjamin F. Bee	Harwich, Mass	Aug. 1, 1854.
Boilers, steam, flue bottom of	Alexander M. Sprague	Mobile, Ala	May 9, 1854.
Boilers, steam, mechanical means for preventing incrustation in.	John McMullen	Baltimore, Md	May 23, 1854.
Boilers, steam, safety apparatus for	Albert H. Judd	St. Louis, Mo	Aug. 15, 1854

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Boilers, steam, regulating the damper of, by the pressure of the steam.	Patrick Clark	Rahway, N. J	Jan. 3, 1854.
Boilers, steam, use of fusible discs in	John Absterdam and William Burnett	Boston, Mass	Feb. 28, 1854.
Boilers, steam, water-level indicator for	Patrick Clark	Rahway, Essex county, N. J	June 6, 1854.
Boilers, steam, water indicators for	Thomas J. Sloan	New York, N. Y	May 16, 1854.
Condensers	Samuel W. Brown	Lowell, Mass	Dec. 19, 1854.
Condensers, surface	William Sewell, assignor to Joseph Barton, re-assignor to W. Sewell.	Brooklyn, N. Y	Oct. 31, 1854. Patented in England Jan. 13, 1854.
Cylinders of steam engines, arrangement of means for lubricating the.	John Absterdam	Boston, Mass	Nov. 21, 1854.
Engine, steam, arrangement of the	Wm. M. Ellis	Washington, D. C	Aug. 22, 1854.
Engine, steam, regulators	Anson Merriman	Middletown, Conn	June 20, 1854.
Engines, actuating by bi-sulphate of carbon	Bernard Hughes	Rochester, N. Y	Aug. 22, 1854.
Engines, beam, parallel motion for	John M. Thompson	Taunton, Mass	July 11, 1854.
Engines, locomotive, arrangement of valve motion for.	Caleb Cook	Nashville, N. H	Mar. 7, 1854.
Engines, locomotive, means for adjusting the valves of.	Henry W. Farley	East Boston, Mass	May 2, 1854.
Engines, high-pressure steam	Benjamin Crawford	Pittsburg, Pa	June 20, 1854.
Engines, marine refrigerators for	J. Merrill, and Geo. Patten	Boston, Mass	Aug. 8, 1854.
Engines, oscillating	William Craig	New York, N. Y	Sept. 12, 1854.
Engines, rotary	Ebenezer Barrows	New York, N. Y	Feb. 7, 1854. Patented in England July 3, 1851.
Engines, rotary	Gerard Sickels	Brooklyn, N. Y	Mar. 14, 1854.
Engines, rotary	R. C. Bristol	China, Mich	Aug. 22, 1854.
Engines, rotary	Charles Rumley	Rochester, N. Y	Nov. 7, 1854.
Engines, rotary steam	Benj. H. Wright	Rome, N. Y	Oct. 24, 1854.
Engines, steam	Benj. F. Day	Philadelphia, Pa	June 20, 1854.
Engines, steam	Wm. Black	Alleghany City, Pa	Sept. 19, 1854.
Engines, steam	Henry Tongue	Nashville, Tenn	Oct. 10, 1854.
Engines, steam	Nathan Atherton	Philadelphia, Pa	Oct. 31, 1854.

Engines, steam, adjusting the packing of piston for.	John Crabtree	Philadelphia, Pa	May 2, 1854.	
Engines, steam, balancing slide-valves of	Robert Waddell	England	June 6, 1854.	
Engines, steam, condensers for	F. G. Smith	Columbia, Maury county, Tenn	July 11, 1854.	
Engines, steam, condensers for	H. Waterman	Hudson, N. Y	Dec. 12, 1854.	
Engines, steam, cut-off, regulators for	H. A. Luttgens	Paterson, N. J	Dec. 12, 1854.	
Engines, steam, regulating the motion of	William C. Hibbard	Boston, Mass	July 4, 1854.	
Engines, steam, oil-cups for	David Clark	Philadelphia, Pa	Jan. 10, 1854.	
Engines, steam, oil-cups for	George Trott	Pittsburg, Pa	Mar. 28, 1854.	
Engines, steam, oscillating	Matthew Cridge, and Samuel Wadsworth	Pittsburg, Pa	Dec. 12, 1854.	
Engines, steam, pistons for	Alexander M. Sprague	Mobile, Ala	May 9, 1854.	
Engines, steam, slide-valve motion of	Martin V. B. Darling	Providence, R. I	July 11, 1854.	
Engine, surface condensers for marine	D. Carpenter	Brooklyn, N. Y	Sept. 12, 1854.	
Gauge, steam	Victor Beaumont	New York, N. Y	Oct. 3, 1854.	
Gauges, steam	Thomas Stubblefield	Columbus, Ga	July 18, 1854.	
Gauges, water, for steam-boilers	William Palmer	New York, N. Y	Jan. 31, 1854.	
Heaters, vertical tube, feed-water in Locomotive smoke-stacks, arrangement of	M. W. Baldwin and David Clark	Philadelphia, Pa	Feb. 14, 1854.	
Locomotive fire-box	Ross and Thomas Winans	Baltimore, Md	May 9, 1854.	
Locomotive tenders	Ross and Thomas Winans	Baltimore, Md	May 23, 1854; antedated May 9, 1854.	
Locomotives, exhaust-pipes of, tapering nozzles to the.	Frederick Espenchade	Mifflintown, Pa	Mar. 14, 1854.	
Locomotives, tanks and cisterns for supplying	Angus W. McDonald	New Creek Depot, Va	Nov. 28, 1854.	
Spark-arresters, for heating feed-water, arrangement in.	R. A. Wilder	Schuylkill Haven, Pa	Oct. 31, 1854.	
Steam, apparatus for controlling the pressure of	Henry S. Williams	Malta, Morgan county, Ohio	Feb. 14, 1854.	
Steam-generators	Alexander B. Latta	Cincinnati, Hamilton county, Ohio	June 6, 1854.	
Valve, gear, for locomotive engines	James Freeland	Alleghany, Pa	Nov. 21, 1854.	
Valve, steam	Robert Ross	Philadelphia, Pa	Aug. 22, 1854.	
Valves and valve-seats of steam-engines	Stephen D. Wilson	Reading, Pa	Jan. 10, 1854.	
Valves, block-slide, for steam-engines	Lewis R. Conard	Philadelphia, Pa	July 18, 1854.	
Valves, cut-off, for steam-engines, operating	Thomas Ashcroft	Dorchester, Mass	June 13, 1854.	
Valves, cut-off, of steam-engines, operating	William Wright	Hartford, Conn	Jan. 3, 1854.	
Valves, cut-off, of steam engines, operating	William Lowe	Hartford, Conn	July 11, 1854.	
Valves, faucet, steam-engine	Abijah Taylor	Pekin, Ill	Mar. 14, 1854.	
Valves, for steam-pumps, operating	Charles A. Wilson	Newport, Campbell county, Ky	June 13, 1854.	
Valves, piston, and steam passages in cylindrical steam-chests.	Joseph Marks	Boston, Mass	Jan. 24, 1854.	

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Valves, slide, from steam-engine	John Gleason	Northfield, Vt	Aug. 29, 1854.
Valves, slide, in steam-engines, packing	Daniel B. Martin	Washington, N. J	Nov. 21, 1854.
Valves, slide, for the exhaust steam	Henry Bates	New London, Conn	Nov. 14, 1854.

CLASS VII.—NAVIGATION AND MARITIME IMPLEMENTS, *comprising all vessels for conveyance on water, their construction, rigging, and propulsion, diving-dresses, life-preservers, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Anchors or drags, floating	Abel F. Lewis	Shopiere, Rock county, Wis	Aug. 22, 1854.
Berth-knee former	Donald Taylor	East Boston, Suffolk county, Mass.	June 6, 1854.
Boats and other vessels, method of unloading, canal.	William Loughridge	Weverton, Frederick county, Md	May 9, 1854.
Boats, canal, arrangement of lever, and catch for tow-line of.	J. W. Cadwell	Rochester, N. Y.	Nov. 14, 1854.
Boats, canal, arrangement of means for freeing from water.	Wm. Loughridge	Weverton, Frederick county, Md.	July 11, 1854.
Boats, canal, method of discharging cargo from.	Amos Young	Georgetown, D. C	May 2, 1854.
Boats, life, reversible	Nathan Thompson, jr	Williamsburg, Kings county, N. Y	April 11, 1854.
Boats, ferry, guards for	Daniel Fitzgerald, Thos. Rogers, and Wm. C. Walker.	New York, N. Y.	Dec. 19, 1854.
Cable, chain, stopper	Oldin Nichols	Lowell, Mass	April 4, 1854.
Cable, chain, stopper	Oldin Nichols	Lowell, Mass	April 4, 1854.
Cable, chain, stopper	Charles Perley	New York, N. Y.	June 13, 1854.
Cables, chain, arrangement of means for working and stopping.	Thomas Brown	London, England	July 25, 1854. Patented in England April 20, 1847.
Capstans, reversible	J. A. H. Ellis and Alex. Gordon	Rochester, N. Y.	June 27, 1854.
Grapple for raising sunken vessels	Joseph T. Martin	New York, N. Y.	July 11, 1854

Grommets for sails, metallic	Eldridge H. Penfield	Middletown, Conn	Mar. 14, 1854.
Grommets, metallic	John Allender	New London, Conn	June 20, 1854.
Life-preservers to vests, mode of attaching	Richard L. Nelson	Ocala, Fla	Nov. 21, 1854.
Life-preserving seats	Nathan Thompson, jr	Williamsburg, N. Y.	Dec. 19, 1854. Patented in England Sept. 18, 1854.
Mast-hoop, machine for manufacturing	E. W. Scott	Lowell, Mass	Oct. 31, 1854.
Oar-locks	William P. Glading	New York, N. Y.	Feb. 21, 1854.
Paddle-wheels	William Henry Muntz	Norton, Bristol county, Mass.	July 4, 1854.
Paddle-wheels	Abraham Van Antwerp	Albany, N. Y.	July 25, 1854.
Paddle-wheels	Abner Chapman	Fairfax, Vt	Oct. 3, 1854.
Paddle-wheels, feathering	Samuel and Thomas Champion	Washington, D. C	Jan. 3, 1854.
Paddle-wheels, feathering	Thomas L. Jones, assignor, through Horace Dresser and self, to Jas. B. Jones.	Poughkeepsie, N. Y.	Jan. 10, 1854.
Paddle-wheels, feathering	Thomas and Samuel Champion	Washington, D. C	June 6, 1854.
Paddle-wheels, feathering	Fletcher Felter	Perth Amboy, N. J	Nov. 28, 1854.
Paddle-wheels, submerged	William F. Ketchum	Buffalo, N. Y.	Aug. 1, 1854.
Parrel and bows	John Dane	Portsmouth, N. H	Sept. 26, 1854.
Propellers	Harry Leach	Boston, Mass	Jan. 31, 1854.
Propellers, attaching, to the driving-shaft	James L. Cathcart	Washington, D. C	April 18, 1854.
Rigging, machinery for worming	Jonathan C. Ginn	South Thomaston, Me	Sept. 5, 1854.
Sails, arrangement for reefing	Horace J. Crandall	East Boston, Mass	Dec. 5, 1854.
Sails, top, extra yard to	Frederick Howes	Yarmouth, Mass	June 20, 1854.
Sails, top, arrangement for reefing and furling from the deck of the vessel.	William H. Foster	Portsmouth, N. H	Sept. 5, 1854.
Ship frames, bent timbers for	William Ballard	New York, N. Y.	June 6, 1854.
Ship timbers, ventilating. (See Class V, letter V.)			
Ship ventilator. (See Class V, letter V.)			
Ships' blocks	Elbridge Webber	Gardiner, Me	Mar. 28, 1854.
Ships' blocks, bushing sheaves for	Weatherill Taylor	Camptown, N. J	Aug. 8, 1854.
Ships' capstan and windlass, arrangement of	Jesse Reed	Marshfield, Mass	June 20, 1854.
Ships, constructing, for safety and escape	Joseph Burch	Macclesfield, Chester county, England.	May 23, 1854.
Ships, construction of	John W. Griffith	New York, N. Y.	Oct. 10, 1854.
Ships' knees	William Ballard	New York, N. Y.	May 2, 1854.
Ships' windlasses. (See Class XII, letter W.)			
Soundings, deep-sea, instrument for taking	Charles F. Brown	Warren, Bristol county, R. I	June 6, 1854.
Steering apparatus	John Stowell	Charlestown, Mass	June 13, 1854.
Steering apparatus	Joseph D. Crowell	Boston, Mass	Dec. 5, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Tables, for ships' cabins	William L. Bass	Cambridgeport, Middlesex county, Mass.	May 16, 1854.
Vessels, apparatus for determining the weight of cargoes in. (See letter W, Class XII.)			
Vessels, apparatus for paying the seams of	James W Stoakes	Milan, Erie county, Ohio	Mar. 7, 1854.
Vessels, arrangement of indicating-tubes for ascertaining the draught of, and for trimming.	John E. Vansant	Louisville, Ky.	July 25, 1854.
Vessels, draughting and modelling	Henry C. Deputy	Michigan City, Ind	Aug. 1, 1854.
Vessels, masts of, cap or withe for the	James W. Sikes	Plymouth, N. C	Aug. 1, 1854.
Vessels, mode of raising	Felix Huston	New Orleans, La	July 18, 1854.
Vessels, propulsion of	Henry H. Olds	New Haven, Conn	Dec. 12, 1854.
Yards, trussing, to vessels' masts	Joseph Perkins, assignor to Perkins & Upton.	Salem, Mass.	Dec. 12, 1854.

CLASS VIII.—MATHEMATICAL, PHILOSOPHICAL, AND OPTICAL INSTRUMENTS, *including clocks, chronometers, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Clocks, calendar	John Williams, assignor to F. Curtis & Co	Hartford, Conn.	Sept. 19, 1854.
Clocks, calendar	William H. Akins, assignee of Akins & Burritt.	Ithaca, N. Y.	Sept. 19, 1854.
Clocks, electric	Alexander Hall	Loydsville, Ohio	Sept. 26, 1854.
Clocks, steeple, striking part of	George Deuble	Canton, Ohio	July 25, 1854.
Compasses and callipers	John E. Earle	Leicester, Mass	Aug. 1, 1854.
Counting machines	Paul Stillman	New York, N. Y.	Aug. 22, 1854.
Counting machines, and machines for indicating motion.	W. G. Sterling	Bridgeport, Conn.	Sept. 19, 1854.
Dynamometers, registering	William B. Leonard	New York, N. Y.	Dec. 19, 1854.
Electric magneto machines	Ari Davis	New York, N. Y.	Aug. 1, 1854.

Electro-magnetic engines	Charles G. Page	Washington, D. C	Jan. 31, 1854. Patented in England May 3, 1851.
Levels, spirit	Lebbeus Brooks	Great Falls, N. H	Aug. 29, 1854.
Lightning rods	Amos Lyon	Worcester, Mass	July 11, 1854.
Lightning rods for vessels	Robert B. Forbes	Boston, Mass	July 4, 1854.
Lightning rods, insulators for	Timothy U. Webb	Jersey City, N. J	Aug 15, 1854.
Magnetic toy, called the "magical cupid"	James Swaim	Philadelphia, Penn	Jan. 10, 1854.
Numbers, machines for adding	Aaron L. Hatfield	Lewisburg, Penn	Sept. 26, 1854.
Odometers	Julius Thompson	Middleboro', Mass	Oct. 31, 1854.
Odometers	Samuel R. Thorp	Batavia, N. Y	Oct. 31, 1854.
Odometers, railroad	Merritt F. Potter	Charlemont, Franklin co., Mass	June 13, 1854.
Square, scale, level, and bevel	Josiah Shanklin	Parkersburg, Va	Oct. 24, 1854.
Telegraph wires, apparatus for coating	J. Burrows Hyde	New York, N. Y	Aug. 22, 1854.
Telegraph wires, insulating	John M. Batchelder	Cambridge, Mass	June 13, 1854.
Telegraphic keys	John Davis	New Bedford, Mass	Sept. 19, 1854.
Telegraphic register, mode of making battery connexion with an electro-magnetic coil on the travelling carriage of a.	Jno. M. Batchelder and M. G. Farmer	Salem, Mass	Feb. 7, 1854.
Telegraphic wires, compositions for coating, and for other purposes. (See Class IV, letter C.)			
Watch-chain swivel	Nathan F. Mathewson	Providence, R. I	June 20, 1854.
Watch hands, punches and dies for punching. (See Class II, letter P.)			

Class IX.—Civil engineering and architecture, *comprising works on rail and common roads, bridges, canals, wharves, docks, rivers, weirs, dams, and other internal improvements, buildings, roofs, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Battery, sub-marine	Joseph Frey and D. B. Burnham	Battle Creek, Calhoun county, Mich.	July 4, 1854.
Blasting rocks	C. F. Brown	Warren, R. I	July 11, 1854.
Blasting rocks, timber, &c	John Norton	Cork, Ireland	Aug. 8, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Blinds, folding	Mansel Blake, assignor to M. Blake, Jas. B. McAlester, and E. Blake.	Sutton, N. H.	Mar. 14, 1854.
Bridge, draw, railroad, and switch telegraph	William McRea	Philadelphia, Pa.	Oct. 3, 1854.
Bridges	Albert Fink	Baltimore, Md.	May 9, 1854.
Bridges	Samuel and Thomas Champion	Washington, D. C.	July 18, 1854.
Bridges, drop	Jacob D. Woodruff and Joshua H. Butterworth.	Newark, N. J.	Feb. 14, 1854.
Bridges, iron	John Yandell and Joseph H. Johnson	St. Louis, Mo.	Oct. 17, 1854.
Bridges, iron, trusses for	George W. Thayer	Springfield, Mass.	April 11, 1854.
Bridges, travelling	Frederick Field	Adrian, Lenawee county, Mich.	April 25, 1854.
Bridges, tubular	Eden A. Baldwin	Elmira, N. Y.	Aug. 8, 1854.
Buildings, iron	Stephen Colwell	Philadelphia, Pa.	April 11, 1854.
Buildings, iron, mode of constructing	Amos J. Saxton	Brooklyn, N. Y.	Aug. 8, 1854.
Buildings, iron	Bernard J. LaMothe	New York, N. Y.	Oct. 17, 1854.
Buildings, lathing	B. F. Gold	New Haven, Conn.	Aug. 1, 1854.
Car-windows, railroad	George Spencer	Utica, N. Y.	Aug. 15, 1854.
Cars, railroad	Bernard J. LaMothe	New York, N. Y.	April 4, 1854.
Cars, railroad, apparatus for starting	William Palmer	New York, N. Y.	Oct. 3, 1854.
Chair, machinery, railroad	Benjamin F. Gossin	Covington, Ky.	Oct. 10, 1854.
Chair, railroad, machines	Michael M. Gray	Philadelphia, Pa.	Feb. 28, 1854.
Chairs, for round rails	Patrick S. Devlan	Reading, Pa.	Oct. 24, 1854.
Chairs, railroad, making	John C. Ogden, assignor to Charles S. Ogden.	Philadelphia, Pa.	April 4, 1854.
Cistern arches, arch-boards for mode of arranging.	Harvey and S. E. Crosby	Gustavus, Trumbull county, Ohio.	July 11, 1854.
Cow-catchers	Thomas B. Smith	Triune, Williamson county, Tenn.	July 11, 1854.
Ditching-plough. (See Class I, letter P.)			
Docks, bilge, supporters for holding vessels n.	Horace J. Crandall	Boston, Mass.	Dec. 19, 1854.
Docks, dry	James E. Simpson	East Boston, Mass.	Dec. 5, 1854.
Docks, dry, and others, method of holding vessels by the keel in.	Jonathan Smith	Neponset village, Mass.	Dec. 19, 1854.
Docks, dry, sectional	Samuel Loveland	Astoria, N. Y.	Mar 7, 1854; antedated September 7, 1853.

Docks, dry, sectional or railway, mode of adjusting vessels upon the keel-blocks of.	Horace J. Crandall	East Boston, Mass	Nov. 14, 1854.
Doors, trap	Gustavus Runge	Philadelphia, Pa	July 11, 1854.
Dredging-machines	Charles H. Fondé, and Thomas B. Lyons	Mobile, Ala	Mar. 21, 1854.
Excavating earth, machines for	John Taggart, assignor to John Taggart and Richard Pitts.	Roxbury, Mass	July 4, 1854.
Excavating-machine	George D. Stillson	Rochester, N Y	Nov. 14, 1854.
Excavating machines, mode of operating	Joel A. H. Ellis and Alex. Gordon	Rochester, N. Y	July 18, 1854.
Excavators	Elijah Phelps	Hendersonville, Knox county, Ill.	June 6, 1854.
Excavators and ditching plough. (See Plough, Class I.)			
Fence, field	Daniel R. Prindle	East Bethany, Genesee county, N. Y.	April 25, 1854.
Fence-posts, excavator for	Ransom P. Adams	Clinton, Dewitt county, Ill	May 23, 1854.
Foundations, mode of securing stones in	John P. Avory	Norwich, New London county, Conn.	April 25, 1854.
Gates, canal, mode of closing wickets in	D. N. Kownover, assignor to R. L. Kownover.	Danville, Montour county, Pa	June 13, 1854
Gates, canal, lock	G. W. Wood and L. O. Webster	Utica, N. Y	June 13, 1854.
Gates, &c., method of hanging	N. W. Cilley	Nottingham, Rockingham county, N. Y.	May 16, 1854.
Gates, farm	Dewey Phillips	Shaftsbury, Vt	Nov. 7, 1854.
Gates, hanging	Ashley Hotchkin	Schenevus, Otsego county, N. Y.	Mar. 7, 1844.
Gates, method of opening and closing	William G. Phillips	Newport, Del	Mar. 7, 1854.
Hatches, construction of	Daniel Tallcot	New York, N. Y	May 9, 1854.
Houses, construction of iron	Charles Mettam	New York, N. Y	July 11, 1854.
Manure and sand loader. (See Class I.)			
Pavement-washer, hose-hydrant, and hitching post. (See Class XI, letter H.)			
Pavements, foundations for	John B. Wickersham	New York, N. Y	July 11, 1854.
Pavements, wooden	Samuel Nicholson	Boston, Mass	Aug. 8, 1854.
Plastering, machines for	Isaac Hussey	Harveysburg, Warren county, Ohio	Mar. 7, 1854.
Piles, mechanism for sawing off, under water	Vincent Palen	Portsmouth, Va	Oct. 31, 1854.
Rails, adjustable, for replacing cars on the tracks.	Charles Perley	New York, N. Y	June 13, 1854.
Roofs, forming	William G. Sterling	Bridgeport, Conn	April 25, 1854.
Roofing, metallic, mode of constructing	Henry Outcalt	Wilmington, Ohio	July 11, 1854.
Railroad switches, self-acting	Joseph Wilson	Hartford, Conn	Mar. 7, 1854.
Railroad tracks and wheels, combination of	Henry R. Campbell	Lebanon, N. H	June 6, 1854.
Railroad frog-guards	Henry W. Farley	Boston, Mass	April 4, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees	Residence.	Date of patent.
Sashes, balancing and hoisting apparatus for	Robert Marquis	Xenia, Ohio	Aug. 22, 1854.
Sashes, window, mode of balancing	Alfred T. Clark	Lancaster, Penn	May 23, 1854.
Scoops, sub-marine	Anson Balding	Olney, Richland county, Ill	Mar. 28, 1854.
Scraper and spreader, road	Thomas Penrose	Ellington, Adams county, Ill	June 27, 1854.
Scrapers, road	Samuel H. Dudley	Milton, Conn	June 6, 1854.
Seats for public buildings	Augustus Eliaers	Boston, Mass	Nov. 28, 1854.
Seats for public buildings	Aaron H. Allen	Boston, Mass	Dec. 5, 1854.
Shutters, slat, metallic	John B. Cornel	New York, N. Y	Sept. 12, 1854.
Staging, portable	William P. Goolman & Samuel Morris	Springtown, Ind	Sept. 19, 1854.
Switches, railroad	Samuel P. Kittle	Buffalo, N. Y	Dec. 5, 1854.
Switch-tenders, houses for	Willis Mansfield	New Haven, Conn	Aug. 1, 1854.
Table, turn	Jacob C. Robie	Binghampton, N. Y	Aug. 15, 1854.
Troughs, eaves, suspending	Chauncey D. Woodruff	Toledo, Ohio	Mar. 7, 1854.
Vault covers	Alfred Brady	New York, N. Y	June 6, 1854.
Vault covers, catch for	Joshua K. Ingalls	Williamsburg, N. Y	July 4, 1854.
Vault lights	Thaddeus Hyattt	New York, N. Y	Sept. 19, 1854.
Window-blind holder	E. W. Bullard	Hardwick, Mass	Aug. 29, 1854.
Window blinds, iron slats for, mode of manufacturing.	William E. Ward	Port Chester, N. Y	July 11, 1854.
Window-cord pulleys. (See Class XII, P.)			
Window-sashes, applying springs to	Albert G. Safford	Boston, Mass	Aug. 8, 1854.
Windows	Mark A Heath	Providence, R I	July 25, 1854.
Windows, tightening	Thomas Silver	Philadelphia, Penn	June 13, 1854.

CLASS X.—LAND CONVEYANCE, *comprising carriages, cars, and other vehicles used on roads, and parts thereof.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Axle, carriage	Ely H. Green	Baltimore, Md	June 13, 1854.
Axles, carriage	William H. Saunders	Hastings on Hudson, Westchester county, N. Y.	June 27, 1854.
Axles, railroad car	James E. McConnell	Wolverton, England	Oct. 31, 1854.
Axles, railroad, divided	Samuel L. Denney	Christiana, Pa	Jan. 31, 1854.
Boxes, anti-friction	David A. Morris	Pittsburg, Pa	Mar. 21, 1854.
Brakes, car, arrangement of bumpers for self-acting.	James J. McComb	New Orleans, La	Dec. 12, 1854.
Brakes, car, connecting a series of	Paul Moody	Camden, N. J.	Sept. 26, 1854.
Brakes, car, machinery for operating	Joseph Marks, assignor to Wm. Whiting	Dunkirk, Chatauque co., N. Y. Roxbury, Mass	Mar. 28, 1854; patented in England Nov. 2', 1852.
Brakes, car, machinery for operating	Joseph Marks and John Howarth, assignors to Wm. Whiting	Salem, Essex county, Mass Roxbury, Mass	Mar. 28, 1854.
Brakes, car, method of engaging and disengaging self-acting.	Geo. T. Leach	Boston, Mass	Nov. 14, 1854.
Brakes, car, railroad	Lucien B. Batcheller	Arlington, Vt	Jan. 24, 1854.
Brakes, carriage	Joseph Sollenberger	Higginsport, Ohio	Mar. 7, 1854.
Brakes, for checking and starting cars	Robert Grant	New York, N. Y	Oct. 10, 1854.
Brakes, for light vehicles	Moses D. Wells	Morgantown, Va	July 11, 1854.
Brakes, radial arms for car	Thomas G. McLaughlin	Philadelphia, Pa	June 20, 1854.
Brakes, railroad car	Benj. F. Reimer	Philadelphia, Pa	June 20, 1854.
Brakes, railroad car	Matthias P. Coons	Brooklyn, N. Y	Aug. 15, 1854.
Brakes, railroad car	Thos. G. McLaughlin	Philadelphia, Pa	Aug. 15, 1854.
Brakes, railroad car	Michael Shimer	Uniontown, Pa	Dec. 5, 1854.
Brakes, railroad car	Marcus P. Norton	Tinmouth, Vt	Nov. 7, 1854.
Buggies	Jas. S. McClelland	Jefferson, Ind	Aug. 8, 1854.
Buggies, joint-bodied	Edwin J. Green	Cedarville, Herkimer county, N. Y.	June 6, 1854.
Car-couplings	George Aulick	Winchester, Va	April 18, 1854.
Car, coupling	Thomas B. Stout	Keyport, N J	Aug. 8, 1854.
Car, coupling, railroad	Joseph Miller	Olean, N. Y	Nov. 14, 1854.
Car, dumping	Alex. H. Petsch	Charleston, S. C	Aug. 1, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Car, dumping	John Kimbel	Zanesville, Ohio	Oct. 3, 1854.
Car, railroad, couplings	David A. Hopkins	Elmira, N. Y	Aug. 1, 1854.
Car seats, railroad	W. B. Thomas and S. Hickok	Buffalo, N. Y	April 25, 1854.
Car seats, railroad	William E. Milligan	New York, N. Y	April 25, 1854.
Car seats, railroad	William Graham and L. McLaren	Philadelphia, Pa	Sept. 26, 1854.
Car seats, railroad	John T. Hammitt	Philadelphia, Pa	Dec. 5, 1854.
Car seats, railroad	Charles P. Bailey	Zanesville, Ohio	Oct. 10, 1854.
Car seats, mode of converting the backs of into beds or lounges.	Henry B. Myer	Buffalo, N. Y	Sept. 19, 1854.
Car trucks, with adjustable axles	A. C. Ketchum	New York, N. Y	May 2, 1854.
Cars, baggage, doors of	Henry L. Clark	Laporte, Ind	Sept. 5, 1854.
Cars, dumping	Charles P. Bailey	Zanesville, Ohio	Jan. 24, 1854.
Cars, dumping, operating	Abram C. Johnson	Meadville, Crawford county, Pa	April 18, 1854.
Cars, earth	R. H. Emerson	Chicago, Ill	April 11, 1854.
Cars, railroad, contrivances for protecting passengers in.	Samuel F. Holbrook	Boston, Mass	Feb. 21, 1854.
Cars, railroad, ticket-box for	David A. Hopkins	Elmira, N. Y	April 18, 1854.
Cars, railroad, running gear of	David G. Smith	Carbondale, Pa	Dec. 5, 1854.
Cars, railroad, spiral springs for	Fowler M. Ray	New York, N. Y	April 18, 1854.
Cars, unloading coal and other	Andrew Patrick	Alleghany county, Md	Aug. 15, 1854.
Carriage-bodies, hanging	B. F. Brown	Dorchester, Mass	Dec. 12, 1854.
Carriage-springs, for light vehicles	Mary Burns, administratrix of Robert Burns, jr., deceased.	New York, N. Y	July 18, 1854. Patented in England June 7, 1853.
Carriage, spring body	Alexander Moffitt	Brownsville, Pa	Aug. 8, 1854.
Carriage tops	Rodney Miller	Middlefield, Ohio	April 4, 1854.
Carriage tops	Solomon T. Huntington	Syracuse, N. Y	June 20, 1854.
Carriage tops, lowering, raising, and fastening	Zina S. Ogden, assignor to Lewis C. Ogden	Glen's Falls, N. Y	Jan. 3, 1854.
Carriage tops, mode of raising and letting fall	Joseph R. Winchester	Medina, Orleans county, N. Y	June 20, 1854.
Carriages	James L. Rowley, assignor to J. L. Rowley and R. H. Gilson.	Staunton county, Ind	June 13, 1854.
Carriages, coupling for	N. B. Livingston	Portland, Ind	July 25, 1854.
Carriages, coupling for	A. J. Gibson	Clinton, Mass	Sept. 12, 1854.

Carriages, preventing rattling in	William S. Chapman	Cincinnati, Ohio	Aug. 8, 1854.
Cart, self-loading and dumping	Sanford Stone	Kirkersville, Ohio	Aug. 1, 1854.
Case, for holding railway and other tickets	Joseph Edmondson and C. Haworth, executors of T. Edmondson, deceased.	Salford, Lancaster county, England.	May 16, 1854.
Coupling	M. Newman, 2d	Lanesboro', Susquehanna county, Penn.	June 13, 1854.
	N. C. Whitcomb	Lanesboro', Susquehanna county, Penn.	
	G. C. Cole	Hartford, Conn	
Engine locomotive, running-gear of	Septimus Norris	Philadelphia, Penn	Sept. 26, 1854.
Felloe machine. (See Class XIV.)			
Hub-bands for carriages	J. Jenkins & J. R. Cooke	Winstead, Conn	Dec. 12, 1854.
Hubs, metallic	J. B. Hayden	Easton, Washington county, N. Y.	Feb. 7, 1854.
Hubs to axles, attaching	Elnathan Sampson	Claremont, Sullivan county, N. H.	Feb. 21, 1854.
Hubs to axles, mode of securing	Cook Darling	Utica, N. Y	Aug. 15, 1854.
Omnibus registers	F. O. Deschamps	Philadelphia, Penn	Feb. 7, 1854.
Omnibus registers	Levi W. Mallory, assignor to Wm. Morris	Philadelphia, Penn	June 20, 1854.
Omnibus registers	William Morris	Philadelphia, Penn	Nov. 14, 1854.
Omnibus step protector	Thomas Coles	New York, N. Y	July 25, 1854.
Snow ploughs for railroads	Abijah Hall and Sylvanus Sturtevant	South Paris, Me	Feb. 28, 1854.
Springs, pneumatic	James F. Heyward	Wilmington, Del	Dec. 12, 1854.
Track clearers for railroads	Edward H. Ashcroft	Boston, Mass	Mar. 28, 1854.
Trucks, railroad car	Abram Snyder	Hawley, Wayne county, Penn	July 18, 1854.
Vehicles	Abram J. Gibson	Clinton, Worcester county, Mass.	July 25, 1854.
Vehicles, mode of attaching thills and poles to	Abram J. Gibson	Clinton, Worcester county, Mass.	Aug. 1, 1854.
Vehicles, mode of attaching whiffle-trees to	Abram J. Gibson	Clinton, Worcester county, Mass.	Aug. 1, 1854.
Wagons, attaching shafts to	Daniel Haight, jr.	Clinton, N. Y	Jan. 24, 1854.
Wagons, dumping	Wm. S. Babcock	Stonington, Conn	Aug. 8, 1854.
Wagons, &c., running-gear of	Isaac Crandall	Cherry Valley, N. Y	Jan. 3, 1854.
Wagons, seats for	Chesley Jarnagin	Clinton, Tenn	Oct. 31, 1854.
Wagons, tail-boards of	F. M. Harris	Carroll, Ohio	June 13, 1854.
Wheels, car, fastening the discs and rims of	Abel Breaer	Saugatuck, Fairfield county, Conn.	May 30, 1854.
Wheels, car, with independent flange and tread.	William S. McLean	Pittsburg, Pa	Aug. 1, 1854.
Wheels, car, securing upon axles	Jordan L. Mott	New York, N. Y	June 6, 1854.
Wheels, cast-iron, car	George W. Glass	Alleghany City, Pa	April 25, 1854.
Wheels, cast-iron, car	David Prew	Taunton, Mass	June 13, 1854.
Wheels, cast-iron, car	John Henry	Lynchburg, Va	June 20, 1854.
Wheels, cast-iron, car	Benj. Severson	Philadelphia, Pa	July 4, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Wheels, driving, of locomotives, for ascending inclined planes.	Josephine Morse	Washington, D. C	Sept. 5, 1854.
Wheels, locomotive, counterpoise to cast	Henry A. Chase	Boston, Mass	May 23, 1854.
Wheels, railroad car	Jordan L Mott	New York, N. Y	Mar. 21, 1854.
Wheels, railroad car	R. A. Wilder	Schuylkill Haven, Pa.	Mar. 28, 1854.
Wheels, safety-washer for securing to axles	William Thornley	Philadelphia, Pa	Sept. 19, 1854.
Wheels, wrought-iron, car, making	George B. Hartson	New York, N. Y	July 11, 1854.
Whiffletrees	Francis M. English	Hopkinsville, Christian county, Ky	June 6, 1854.
Whiffletrees	Thomas Hardman and Albert Vose	Pittsfield, Vt	Sept. 26, 1854.
Whiffletree-hooks	M. Newman, N. C. Whitcomb, and G. C. Cole	Lanesborough, Pa / Hartford, Conn	Feb. 21, 1854.

CLASS XI.—HYDRAULICS AND PNEUMATICS, *including water-wheels, windmills, and other implements operated on by air or water, or employed in the raising and delivery of fluids.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Balloons, mooring and managing, arrangement for.	John W. Brewer	Cincinnati, Ohio	July 11, 1854
Cock, stop	O. C. Phelps	Boston, Mass	Mar. 14, 1854
Cocks, stop and waste	William Z. Hatcher	Philadelphia, Penn	Aug. 22, 1854.
Engine, hydrodynamic	E. L. St. John	Buffalo, N. Y	May 2, 1854.
Engines, air	A. S. Lyman	New York, N. Y	Feb. 28, 1854.
Engines, air	Philander Shaw	East Abington, Plymouth county, Mass.	May 2, 1854.
Engines, air	James R. Napier, of Glasgow, Lanark county, and William J. M. Rankine.	Govan, Renfrew county, Scotland.	Sept. 19, 1854. Patented in England June 9, 1853.

Engines, fire	Albin Warth	New York, N. Y	Aug. 1, 1854.
Engines, fire, arrangements of devices for applying power to.	Gottleib Backstein	Philadelphia, Penn	Nov. 28, 1854.
Engines, fire, mode of operating	F. G. Smith	Columbia, Tenn	Sept. 12, 1854.
Faucet	Ezra Ripley	Troy, N. Y	Mar. 14, 1854.
Faucet	R. M. Bouton	West Troy, N. Y	April 18, 1854.
Faucets for measuring liquids	Joshua Cross	New London, Ohio	Mar. 14, 1854.
Faucets for measuring liquids	J. B Larwill & J. Cross	Bucyrus, Ohio	Mar. 14, 1854.
Filters	John Kedzie	Rochester, N. Y	Jan. 10, 1854.
Fluids, apparatus for distributing	John W. Middleton	Philadelphia, Penn	Sept. 12, 1854.
Heaters, hydraulic. (See Class V.)			
Hydrant cap	Noah W. Speers	Cincinnati, Ohio	June 6, 1854.
Hydrant, hose, and hitching-post, pavement washer.	Charles M. Alberger	Philadelphia, Penn	Aug. 22, 1854.
Hydraulic engine	Augustus C. Carey & Jeremiah Smith	Ipswich, Essex county, Mass	Mar. 21, 1854.
Hydraulic press	Robert Grant	New York, N. Y	Aug. 1, 1854.
Hydraulic ram	Joseph C. Strode	West Chester, Chester county, Penn.	May 23, 1854.
Hydraulic ram	Joseph D. West	New York, N. Y	Aug. 29, 1854.
Hydraulic ram	Ellis Webb	Parkersville, Penn	Dec. 5, 1854.
Hydraulic ram, tidal or current	John W. Middleton	Philadelphia, Penn	Sept. 19, 1854.
Hydraulic rams, method of operating	Clark Polley	May's Landing, Atlantic county, N. J.	Mar. 7, 1854.
Pneumatic springs. (See Class X, letter S.)			
Pump	Jacob Edson	Boston, Mass	May 9, 1854.
Pump	Ira Carter	Champlain, Clinton county, N. Y.	June 27, 1854.
Pump, centrifugal	William D Andrews	New York, N Y	Aug. 22, 1854.
Pump, diaphragm	Julius A. Pease	New York, N. Y	Aug. 22, 1854.
Pump, double-acting force	John H. McGowan	Cincinnati, Ohio	June 27, 1844.
Pump, hydro-pneumatic force	Alex. B. Latta	Cincinnati, Ohio	June 27, 1854.
Pump, force, double-acting	D. W. Clark and S. H. Gray	Bridgeport, Conn	Dec. 19, 1854.
Pump, rotary	R. Burdine	Washington, D. C	April 25, 1854.
Pump, rotary	Stephen D. Carpenter	Madison, Wis	Oct. 10, 1854.
Pump, rotary	Joshua Gray	Boston, Mass	Dec. 5, 1854.
Pump, valve	L. A. Miles	Hopkinsville, Warren county, Ohio.	May 23, 1854.
Pumps	Joseph Smart	Northern Liberties, Philadelphia, Pa.	Mar. 28, 1854.
Pumps	Jacob Edson	Boston, Mass	April 4, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Pumps	John Tapley	Frankfort, Me	Sept. 19, 1854.
Pumps, &c., rotary piston or valves for	Joseph Gatley	Rome, N. Y	Sept. 12, 1854.
Pumps, diaphragm	Daniel T. Hitchcock	Warren, Mass	Jan. 17, 1854.
Pumps, mechanism for operating	James A. Whipple	Boston, Suffolk county, Mass	June 6, 1854.
Pumps, valves for	Joel R. Bassett, assignor to C. H. Williams	Cincinnati, Ohio	Feb. 14, 1854.
Pumps, valvular arrangement for diaphragm	S. A. Clemens	Springfield, Mass	July 11, 1854.
Syphon, attachment to	Samuel Lenher	Philadelphia Pa	Oct. 31, 1854.
Valve-cock	Benjamin Eakins	Spring Garden, Philadelphia, Pa	April 4, 1854.
Valve-cocks	John Griffiths	Philadelphia, Pa	Feb. 14, 1854.
Valve-cocks, governing the action of	Frederick H. Bartholomew	New York, N. Y	June 20, 1854.
Valves, inclined sliding	Edward H. Tracy	New York, N. Y	Nov. 28, 1854.
Valve puppet for hydraulic rams	Joseph C. Strode	West Chester, Chester county, Pa.	Aug. 29, 1854.
Water, elevating, for the purpose of, method of applying heat to dilate gases.	John W. Middleton	Philadelphia, Pa	Sept. 12, 1854.
Water-meter	Marvin Smith	New Haven, Conn	Sept. 19, 1854.
Water-meter	Joseph D. Elliot	Leicester, Mass	Oct. 17, 1854.
Water-meter	S. R. Wilmot	New Haven, Conn	Oct. 31, 1854.
Water-pipes	Jonathan Ball	New York, N. Y	July 11, 1854.
Water-pipes	Richard B. Stevenson	Sandusky, Ohio	Oct. 17, 1854.
Water-wheel	G. M. Conner	Charlton, Saratoga county, N. Y.	April 18, 1854.
Water-wheel	A. Greenleaf	Kingston, Pa	May 16, 1854.
Water-wheel, reaction	Isaac True	Rochester, Fulton county, Ind	April 25, 1854.
Water-wheels	Lorenzo D. Goodwin	Perueville, N. Y	April 4, 1854.
Water-wheels, gates for	Elijah Roberts	Rochester, N. H	April 4, 1854.
Wheel, water	B. T. Hall	Seneca Falls, N. Y	July 25, 1854.
Wheel, water, direct-action	Stephen Hadley, jr	Lyman, N. H	Dec. 19, 1854.
Wheel, water, impact	A. Greenleaf	Kingston, Luzerne county, Pa	July 11, 1854.
Wheels, flutter, applying water to cuniformed buckets of.	David Rankin	Augusta county, Va	July 11, 1854.
Wheels, turbine, mode of manufacturing	Charles H. Bigelow	Lawrence, Essex county, Mass	May 30, 1854.
Wheels, water, improved joint in	Reuben Daniels	Woodstock, Vt	Nov. 7, 1854.

Wheels, water, head-gate for	Hartwell L. Turner	Strykersville, Wyoming co., N. Y.	June 27, 1854.
Wind-mill	Jacob Erdle	West Bloomfield, Ontario co., N.Y.	July 18, 1854.
Wind-mill sails, method of furling and unfurling	T. C. Vice	Rochester, N. Y.	Aug. 29, 1854.
Wind-mills, governor for	Daniel Halladay	Ellington, Conn	Aug. 29, 1854.

CLASS XII.—LEVER, SCREW, AND OTHER MECHANICAL POWER, *as applied to pressing, weighing, raising, and moving weights.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Belt clasps for machinery	H. G. Ellsworth	Auburn, N. Y.	Mar. 28, 1854.
Blocks, nipper, self-acting	Wm. Waley, assignor to	New London, Conn.	May 30, 1854.
	Jonathan Whipple, jr	Hopedale, Mass.	
Capstans, reversible. (See Class VII.)			
Derricks	John B. Holmes	Boston, Mass.	Feb. 21, 1854.
Jacks, carriage lifting	John Jenkins, assignor to	Monroe, N. Y.	Nov. 7, 1854.
	Roe, Horton & Co	Chester, N. Y.	
Jacks, lifting	Jeremy W. Bliss	Hartford, Conn	Mar. 21, 1854.
Jacks, lifting	F. B. Smith	Craigsville, Orange county, N. Y.	July 11, 1854.
Jacks, lifting	Robert W. Genung	Blooming Grove, Orange co., N. Y.	July 11, 1854.
Jacks, screw	Francis Davis, assignor to J. M. Reed	Keene, Mass.	May 9, 1854.
Lever ratchet	Hiram Baldwin	Nashua, Hillsborough co, N. H.	May 23, 1854.
Lubricating apparatus	Joshua Regester, assignor to Clampitt & Register.	Baltimore, Md.	Dec. 5, 1854.
Lubricating compound	George A. Colehamer	Reading, Berks county, Pa.	July 25, 1854.
Lubricating material	William Little	Strand, Middlesex co., England	Aug. 1, 1854. Patented in England July 14, 1853.
Lubricator	John Webster	New York, N. Y.	April 11, 1854.
Lubricator	Robert M. Wade	Wadesville, Clark county, Va.	June 6, 1854.
Oilers for machinery	Dewitt C. Smiley	New York, N. Y.	April 25, 1854.
Packing-machines, salt	John G. Fulton	Middleport, Ohio	Aug. 8, 1854.
Press, hydraulic. (See Class XI, letter H.)			
Press power, self-acting	Elias Davis	Montpelier, Vt.	May 23, 1854.
Presses, cheese	Philander Wilbor	Milan, Ohio	Aug. 22, 1854.
Presses, cotton	Cyrus J. Fay	North Lincoln, Me.	Jan. 31, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Presses, cotton	Nathan Chapman	Mystic River, Conn.	Aug. 8, 1854.
Pres es for making miniature cases. (See Class XVIII—miniature.)			
Presses for moulding glass	William O. Davis	Pittsburg, Pa	Jan. 31, 1854.
Presses, hay	Levi Dederick	Albany, N. Y	June 6, 1854.
Presses, hay and cotton	Levi Dederick	Albany, N. Y	May 16, 1854.
Presses, hay and cotton	Alden Adams	Jerseyville, Ill	Nov. 28, 1854.
Presses, oil or blubber	William P. Chadwick	Edgartown, Dukes county, Mass.	July 11, 1854.
Presses, seal	James Foster, jr., assignor to Platt Evens, jr.	Cincinnati, Ohio	Feb. 21, 1854.
Presses, cheese, self acting	Solomon W. Ruggles, assignor to Ruggles, Smith & Austin.	Fitchburg, Mass	July 4, 1854.
Pulleys, bearings for loose	William Campbell, assignor to William Campbell & E. W. Shippen.	West Philadelphia, Pa	Oct. 24, 1854.
Pulleys to shafts, attaching	Charles Clarene	New York, N. Y.	Sept. 5, 1854.
Pulleys, window-cord	J. W. Bliss	Hartford, Conn	Feb. 21, 1854.
Scales, platform	Elnathan Sampson	Windsor, Vt	July 25, 1854.
Scales, platform	J. F. Keeler	Cleveland, Ohio	Sept. 26, 1854.
Weighing and printing butter, machines for	(See Class XVII, letter B.)		
Weight of cargoes in vessels, apparatus for determining the.	Ephraim Morris	South Bergen, N. J	Sept. 12, 1854.
Windlasses	Henry Richards & and Charles F. Winsor	Boston, Mass	Nov. 28, 1854.
Windlasses, ships'	Daniel L. Winsor	Duxbury, Mass	Dec. 12, 1854.

CLASS XIII.—GRINDING MILLS AND MILL-GEARING, *including grain mills, mechanical movements, and horse-powers, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Bran-duster	Joseph Johnston	Wilmington, Del	Oct. 24, 1854; antedated April 24, 1854.
Cog-gearing	James A. Bazin, assignor to A. B. Ely	Canton, Mass Boston, Mass	Aug. 22, 1854.
Crushers, corn	William Beal	Lowell, Mass	May 30, 1854.
Crushers, quartz. (See Class II, letter Q.)			
Crushers, quartz. (See Class II, letter Q.)			
Crushers, quartz. (See Class II, letter Q.)			
Crushers, quartz. (See Class II, letter Q.)			
Crushers, quartz. (See Class II, letter Q.)			
Crushers, quartz. (See Class II, letter Q.)			
Crushing and grinding minerals and other substances, machine for. (See Class II, letter M.)			
Crushing and pulverizing ores, &c., machinery for. (See Class II, letter O.)			
Crushing ores, machine for. (See Class II, letter O.)			
Crushing quartz, machines. (See Class II, letter Q.)			
Flour-bolt	William H. Akins	Ithaca, N. Y	Sept. 5, 1854.
Flour, clutch in machines for packing	Samuel Taggert	Indianapolis, Ind	Dec. 19, 1854.
Flour-sifter and renovator	M. S. Basset	Wilmington, Del	June 20, 1854.
Flouring and bolting	J. Stouffer, Peter Brough, and J. W. Barr	Chambersburg, Pa	July 11, 1854.
Grain, machine for cleaning and drying	Horatio M. Black	Philadelphia, Pa	Aug. 1, 1854.
Grain, method of cleaning and feeding to the mill stones.	Simeon Shearman	Goshen, Ind	Aug. 1, 1854.
Horse-power hoisting machinery	Abraham Jackson	New York, N. Y	Aug. 1, 1854.
Horse-power, endless chain	G. Westinghouse	Central Bridge, Schoharie county, N. Y.	June 13, 1854.
Horse-power	John A. Pitts	Buffalo, N. Y	July 4, 1854.
Horse-power	William McCord	Sing Sing, N. Y	July 11, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Horse-powers	William Russell Palmer	Elizabeth City, Pasquetunk county, N. C.	July, 18, 1854. Patented in England April 11, 1853.
Horse-powers, endless chain, couplings in	Wm. E. Arnold	Rochester, Mass.	May 2, 1854.
Mill bushes	George L. Dulaney	Long Meadow, Va	Oct. 24, 1854.
Mill, grinding, portable	Lyman Scott	St. Louis, Mo	May 16, 1854.
Mill-stone, dress	William Finkle	Cold Creek, Fountain county, Ind.	July 4, 1854.
Mill-stone, dress	E. P. Gaines	Mellrose, Texas	July 25, 1854.
Mill-stone, dress	Perry Dickson	Woodcock township, Crawford county, Pa.	Sept. 12, 1854.
Mill-stone, dress, for cleaning grain	Wilson Ager	Rohrsburg, Columbia county, Pa.	Sept. 5, 1854.
Mill-stones, dressing	Thomas W. Trussell	Frederick county, Va	Nov. 21, 1854.
Mill-stones, machines for dressing	J. G. Shands	St. Louis, Mo	Mar. 21, 1851.
Mill-stones, machines for dressing	Elliot C. Badger	Warner, N. H.	Sept. 19, 1854.
Mill, wind	James Curtis	Chicago, Cook county, Ill.	May 23, 1854.
Mills	David L. Latourette	St. Louis, Mo	June 13, 1854.
Mills	William Warwick	Birmingham, Pa	Oct. 24, 1854.
Mills, cider	Daniel Ziegler	Lewistown, Pa.	July 25, 1854.
Mills, flouring	Edwin and James M. Clark	Lancaster, Pa.	June 6, 1854.
Mills, flouring, cleaning bolts of	Wm. Caun	Black Rock, Erie county, N. Y.	June 6, 1854.
Mills for grinding	Thomas B. Woodward	Kensington, Philadelphia, Pa.	July 11, 1854.
Mills for grinding ores, &c. (See Class II, letter O.)			
Mills for grinding sumac	Peter and W. S. and J. J. Hench	Port Royal, Pa.	Jan. 24, 1854.
Mills, grain	Walter Westrup	Wapping, Middlesex county, England.	June 6, 1854. Patented in England Jan. 24, 1850.
Mills, grain	Henry Mellish	Walpole, N. H.	Aug. 22, 1854.
Mills, grain	George W. Grader and Benj. F. Cowan	Memphis, Tenn	Dec. 19, 1854.
Mills, grinding	John C. Reed, assignor to C. P. Buckingham, H. P. Upton, and J. C. Reed.	Mount Vernon, Knox county, Ohio.	June 6, 1854.
Mills, grinding	Edward Harrison	New Haven, Conn	June 6, 1854.
Mills, grinding, surface in	Charles Ross	Rochester, N. Y.	Oct. 17, 1854.
Mills, hominy	Benj. Bridendolph	Clear Spring, Md.	Aug. 22, 1854.

Mills, grinding	Isaac Straub	Cincinnati, Ohio	June 27, 1854.
Mills, cider	Jesse Bauman	Shepherdstown, Cumberland co., Pa.	June 27, 1854.
Mills, portable grist	Samuel Sheldon	Cincinnati, Ohio	Sept. 12, 1854.
Motion, converting reciprocating into rotary	C. B. Gallagher	San Francisco, Cal.	Nov. 28, 1854.
Motion, producing continuous circular, from reciprocating rectilinear.	Charles S. Harris	Holyoke, Mass	June 20, 1854.
Sifting and bolting	Mark S. Bassett	Wilmington, Del	Oct. 24, 1854.
Smut-machines	Lewis Fagin	Cincinnati, Ohio	Mar. 14, 1854.
Smut-machines	Seymour Ketchum	Lancaster, Ohio	Mar. 28, 1854.
Smut-machines	George B. Turner	Cuyahoga Falls, Summit co., Ohio.	May 23, 1854.
Smut-machines	Henry B. James	Mount Holly, N. J	June 27, 1854.
Smut-machines	Thomas B. Woodward	Kensington, Pa	Oct. 10, 1854.
Smut machines	John D. Bedwell	Ubrickeville, Ohio	Oct. 24, 1854.
Smut-machines	Levi B. Ball	Putman, Ohio	Nov. 14, 1854.
Stamping machines, ore. (See Class II, letter O.)			

Class XIV.—Lumber, *including machines and tools for preparing and manufacturing, such as sawing, planing, mortising, shingle and stave, carpenters' and coopers' implements.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Augers, gimlets, &c	Washington Spangler, assignor to himself, E. H. Chambers, and Wm. F. Wilson.	Harper's Ferry, Va	July 11, 1854.
Axes, &c., method of securing helves in	H. N. & J. C. Bill	Willimantic, Conn	July 25, 1854.
Barrel heads, apparatus for rounding and bevelling.	Joel P. Heacock	Marlboro, Stark county, Ohio	Mar. 7, 1854.
Barrel machinery	Horace S. Higgins	Graham, Ia	Nov. 7, 1854.
Barrel, ventilated flour	Thomas Pearsall	Smithboro, Tioga county, N. Y	June 27, 1854.
Barrels, machine for creasing and bevelling	Archibald H. Crozier	Oswego, N. Y	July 4, 1854.
Barrels, machinery for making	George W. Livermore	Cambridgeport, Mass	Mar. 21, 1854.
Bed-pins, machines for making	William McBride	Bristolville, Ohio	Feb. 28, 1854.
Bed-pins, machines for making	Curtis Goddard	Edinburg, Portage county, Ohio	May 2, 1854.
Blinds, &c., cleaning, machine for	George W. La Baw	Jersey City, N. J	April 18, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Boards, device for grooving	Geo. C. Fisk	Dansville, N. Y	Aug. 8, 1854.
Borer, hub	William J. Casselman	Vernon, Oneida county, N. Y	May 9, 1854.
Boring and mortising carriage hubs, machines for	R. J. R. Stone	Berlin, Erie county, Ohio	Mar. 7, 1854.
Boring and mortising machine	Henry Allen	Norwich, Conn	April 11, 1854.
Boring machine	Benj. F. Taft	South Groton, Mass	Dec. 12, 1854.
Boring recesses for casters, &c., tool for	Benj. F. Graves, assignor to Wm. C. Knowlton	Boston, Mass	Aug. 22, 1854.
Box machine	Ari Davis	Washington, D. C	April 18, 1854.
Boxes, mode of fitting heads in	Charles Williams	Fallsburg, Va	July 25, 1854.
Callipers	Peasley Seaver	Oxford, Mass	June 27, 1854.
Carving machines, bits for. (See Class II, letter B.)			
Clap-board, joint	William Baker	Utica, Oneida county, N. Y	May 16, 1854.
Crozing machines	Alexander Wilbur	Lancaster, Pa	Mar. 21, 1854.
Cutting ellipses, machines for	William G. Merrell	Auburn, N. Y	Jan. 10, 1854.
Dove-tailing, tool for	Amos P. Hughes	Philadelphia, Pa	Feb. 21, 1854.
Dressing ship-timber, machine for	Jas. E. Crowell, assignor to J. B. Crowell, E. Smith, and Charles T. Stickney.	Salem, Essex county, Mass	Aug. 29, 1854.
Felloe-machine	Heman H. Dean	Adrian, Mich	May 9, 1854.
Felloes, machine for bending	Thomas Cox	Lancaster, Pa	July 4, 1854.
Felloes, machine for dressing	Charles W. Wyatt	Newburg, N. Y	Dec. 12, 1854.
Forms, irregular, apparatus to a machine for cutting.	Charles P. Bailey	Zanesville, Ohio	Dec. 19, 1854.
Forms, irregular, lathe for. (See Lathe.)			
Forms, irregular, machines for cutting	Jonathan Russell	Philadelphia, Pa	Jan. 3, 1854.
Forms, irregular, machines for cutting	O. L. Reynolds	Dover, N. H	Aug. 15, 1854.
Forms, irregular, machines for cutting	Arad Aldrick, assignor to John L. Cooper and Arad Aldrick.	Princeton, Mass	Sept. 26, 1854.
Forms, irregular, machines for turning	Aaron D. Crane	Newark, N. J	Aug. 15, 1854.
Gauge, carpenters'	Halcyon Skinner and William Greenhalgh	West Farms, Westchester county, N. Y.	Aug. 22, 1854.
Gauges, slitting	James Ballard	Ashtabula, Ohio	April 18, 1854.
Hoops, splitting, machines for	John W. Chittenden and William C. Mead	Vevay, Ind	Feb. 28, 1854.

Lath-machine	Hiram Frisbee	Olmstead, Cuyahoga county, Ohio.	May 16, 1854.
Lath-machine	Isaac R. Shank	Buffalo, Putnam county, Va.	June 6, 1854.
Laths, machine for cutting	Charles F. Packard	Greenwich, Fairfield county, Conn.	Feb. 21, 1854.
Lathe	Harrison O. Clark	Worcester, Worcester county, Mass.	June 6, 1854.
Lathe-chuck, arrangement for	L. A. Dole	Salem, Ohio	July 25, 1854.
Lathe-dog	David M. Smith	Springfield, Vt	May 16, 1854.
Lathe, for irregular forms	Frank Baker	Pepperill. Middlesex county, Mass.	May 16, 1854.
Lathes, carrier for	Jacob Zook	Harrisburg, Pa	Feb. 28, 1854.
Lathes for turning the interior surface of hollow-ware.	Peter Teal and Charles Tyler, assignors to W. P. Cresson & Co.	Philadelphia, Pa	May 23, 1854. Patented in England April 9, 1853.
Lathes, rotary	George Tugnot	New York, N. Y	Nov. 28, 1854.
Mitre-box	Matthew Spear	Bowdoinham, Lincoln county, Maine.	May 16, 1854.
Mitre box	William Tinsley	Glen's Falls, N. Y	Nov. 28, 1854.
Mitre machine	George W. La Baw	Jersey City, N. J	June 27, 1854.
Mortising chisels	J. W. McGaffey	Philadelphia, Penn	Jan. 10, 1854.
Mortising frames and window blinds, machinery for.	D. M. Cummings	North Enfield, Me	Jan. 10, 1854.
Mortising machine	John E. Brown and S. S. Bartlett	Woonsocket, Providence county, R. I.	Jan. 24, 1854.
Mortising machine	Hiram and Simon H. Plumb	Honesdale, Pa	June 27, 1854.
Mortising machine	B. Holly, assignor to Silsby, Race, and Holly.	Seneca Falls, N. Y	July 25, 1854.
Mortising machine	Wm. H. Morrison and M. W. E. Doran	Indianapolis, Ind	Aug. 1, 1854.
Mortising machine	Hezekiah B. Smith	Lowell, Mass	Jan. 10, 1854.
Mortising sash stiles, machine for	J. B Smith	Milwaukie, Wis	July 11, 1854.
Plane, bevelling	M. J. Wheeler, G. W. Rogers, H W. Pierce, and M. B. Tidey.	Dundee, Yates county, N. Y	July 4, 1854.
Plane, multiform moulding	Thomas Worrall, assignor to Mifflin Paul	Mount Holly, N. J	Aug. 29, 1854.
Plane stocks, method of hanging	Moses G. Hubbard	New York, N. Y	Sept. 5, 1854.
Planing lumber "out of wind," machine for	Solomon S. Gray, assignor to S. S. Gray and S. A. Woods.	South Boston, Mass	Aug. 22, 1854.
Planing knife, rotary	Elbridge Webber	Gardiner, Me	May 2, 1854.
Planing machine	Daniel Van Fleet	Sandusky City, Ohio	Nov. 28, 1854.
Planing machines	James A. Woodbury	Winchester, Middlesex county, Mass.	Feb. 7, 1854.
Planing machines	John D. Dale	Philadelphia, Penn	Oct. 10, 1854.
Planing machines, device for operating cutter heads of.	Timothy F. Taft	Worcester, Mass	June 6, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Planing machines, presser bar for	H. Snow, assignor to	Lowell, Mass	Nov. 21, 1854.
	James A. Woodbury	Winchester, Mass	
Planing, sawing and, machines	Daniel Close	Harmonsburgh, Penn	Aug. 8, 1854.
Planes, bench, bit fastening for cast-iron	William S. Loughborough	Victor, N. Y	April 4, 1854.
Polishing machine	Henry Volkening	New York, N. Y	Oct. 10, 1854.
Polygonal timber, machine for dressing	Henry Allen	Norwich, New London co., Conn	June 6, 1854.
Rails, hand, machines for cutting	Thomas Rogers	Philadelphia, Penn	Jan. 3, 1854.
Sash, machine for marking out	James Rogers	Poultney, Rutland county, Vt	May 9, 1854.
Saw	Linus Stewart	Washington, D. C	May 16, 1854.
Saw-gates, method of hanging and operating	Michael W. Helton	Bloomington, Ind	Jan. 3, 1854.
Saw-gauge	Orson Westgate	Riceville, Pa	Nov. 14, 1854.
Saw-gummers	J. P. Spafford	Brocket's Bridge, N. Y	Jan. 10, 1854.
Saw-gummers	John Jack	Fayetteville, Ohio	Oct. 10, 1854.
Saw-mill blocks, method of operating	David Russell	Drewersburg, Franklin co., Ind	June 6, 1854.
Saw-mill carriages, mechanism for operating	A. S. T. Copeland	Pittsburg, Pa	July 4, 1854.
Saw-mill carriage, journal-box for	Charles R. Fox	Chicago, Ill	May 9, 1854.
Saw-mill dogs	Titus H. Russell	Taftsville, Windsor county, Vt	Aug. 29, 1854.
Saw-mills	Eleazer W. Johnson	Perth Amboy, N. J	Jan. 31, 1854.
Saw-mills	John Stull	Philadelphia, Pa	Aug. 1, 1854.
Saw-mills, mode of controlling and guiding logs in, without a carriage.	C. B. Normand	Havre, France	Nov. 14, 1854. Patented in France Nov. 5, 1852; in England Oct. 27, 1852.
Saw-mills, ratchet-catch for head-blocks in	George F. Page	Baltimore, Md	Jan. 3, 1854.
Saw-set	William O. Rust	Great Falls, N. H	Aug. 22, 1854.
Saw-sets, forcep	James F. Brodhead, assignor to	Rondout, N. Y	Feb. 28, 1854.
	Thomas Ritch	Napanock, N. Y	
Saw-teeth, method of nibbing	Philos B. Taylor	Springfield, Mass	May 16, 1854.
Sawing bevel surfaces, machine for	Alfred C. Cook	Russelville, Ky	Jan. 3, 1854.
Sawing clapboards, &c., machine for	Dustin F. Mellen	Wentworth, N. H	Aug. 22, 1854.
Sawing, curved and bevel, method of controlling the log for.	C. B. Normand	Havre, France	Nov. 14, 1854. Patented in France Nov. 5, 1852; in England Oct. 27, 1852.

Sawing fire-wood, machine for	John J. Efferenn	Springfield, Ill	Aug. 1, 1854.
Sawing fire-wood, machine for	Archibald Winter	Rondout, N. Y.	Sept. 19, 1854.
Sawing light lumber, feed-motion for	John F. Lovecraft	Rochester, N. Y.	Dec. 12, 1854.
Sawing logs, machinery for	Oren Stoddard	Busti, N. Y.	Jan. 3, 1854.
Sawing lumber, feed-motion for	Nicholas G. Norcross	Lowell, Middlesex county, Mass.	Mar. 28, 1854.
Sawing-machine	Charles F. Packard	Greenwich, Conn.	July 11, 1854.
Sawing-machine	Benjamin Fulghum	Richmond, Ind.	Sept. 19, 1854.
Sawing-machine	John I. Squier	St. Louis, Mo.	Oct. 17, 1854.
Sawing-machine, circular	Stephen Waterman	Williamsburg, N. Y.	April 18, 1854.
Sawing-machine, method of operating guide-rollers of feed-clamps in.	Loren J. Wicks	New York, N. Y.	Sept. 19, 1854.
Sawing thin boards, &c., machine for	John Myers and R. G. Eunson	New York, N. Y.	May 23, 1854.
Saws, apparatus for tempering and flattening	William Clemson	Boston, Mass.	Oct. 31, 1854.
Saws, belt	David A. Cameron	Butler, Butler county, Pa.	Mar. 21, 1854.
Saws, circular, adjustable bearings for	Ann G. V. McKinstry, administratix of Wm. McKinstry, deceased.	Washington, D. C.	July 11, 1854.
Saws, circular, form for and mode of operating	James Slater	Macon, Ga.	Nov. 7, 1854.
Saws, cross-cut, method of grinding	Richard Fanning	Clarksfield, Huron county, Ohio	Aug. 29, 1854.
Saws, for mills, method of hanging	C. B. Normand	Havre, France	Nov. 14, 1854.
Saws, method of operating	Frederick T. Andrews	Georgetown, D. C.	Feb. 21, 1854.
Saws, mill, apparatus for filing	John Sheffield	Pultneyville, N. Y.	June 6, 1854.
Saws, mill, device for adjusting	Thomas M. Chapman	Old Town, Me.	Nov. 14, 1854.
Saws, mode of banding pulleys for	D. H. Chamberlain, assignor to Chamberlain and Hunt.	Boston, Mass.	Jan. 3, 1854.
Saws, mode of driving and straining	James and John Fishwick	Lexington, Ky.	July 25, 1854.
Saws, wood	R. and A. F. Andrews	Avon, Conn.	Jan. 24, 1854.
Saws, wood, machine for manufacturing frames of	Thomas Batchelder	Candia, N. H.	Oct. 3, 1854.
Shingle-machine	John A. Bradshaw	Lowell, Mass	Oct. 10, 1854.
Shingle-machine	Elijah Morgan	Morgantown, Va	Oct. 10, 1854.
Shingle-machine	Harry H. Evarts, assignor to himself and A. J. Brown.	Chicago, Ill.	Oct. 31, 1854.
Shingle-machine	William Stoddard	Lowell, Mass	Nov. 14, 1854.
Shingle-machine	Adoniram Kendall	Cleveland, Ohio	Nov. 21, 1854.
Shingle-machine	John J. Speed, jr., and John A. Bailey	Detroit, Mich.	Dec. 19, 1854.
Shingle-machine, rotary	William Stoddard	Lowell, Mass	May 16, 1854.
Shingle-machine, construction of	Henry C. Smith	Cleveland, Ohio	Mar. 28, 1854.
Shingles, method of sawing	Charles J. Conrad	Lower Augusta Township, Pa.	Sept. 19, 1854.
Slivers, machine for reducing wood to	Jonathan and Geo. W. Prescott	Boston, Mass	May 9, 1854.
Slotting-machine	Parley Williams, 2d	Barre, Worcester county, Mass.	May 2, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Sockets, for bench hooks	Joseph Sawyer	South Royalton, Mass.	Feb. 28, 1854.
Spoke-machines	Newall North	Stow Township, Summit co., Ohio.	Sept. 12, 1854.
Spoke-machines, device for holding pieces in	J. Starkes and L. Perrigo	Groton, Tompkins county, N. Y.	June 13, 1854.
Spokes, machine for dressing	Ansel Merrell, assignor to John M. Irvine and Ansel Merrell.	New Bedford, Mass.	Feb. 7, 1854.
Spokes, machine for dressing	R. P. Benton	Rochester, N. Y.	Mar. 21, 1854.
Squares, carpenters', machine for graduating	N. Millington and D. J. George	Shaftsbury, Vt.	Aug. 8, 1854.
Stave-machine	Carmi Hobson	Hannibal, Marion county, Mo.	May 30, 1854.
Stave-machine	J. B. Dudrey	Athens, Athens county, Ohio.	Aug. 29, 1854.
Stave-machine	J. B. Dudrey	Athens, Athens county, Ohio.	Aug. 29, 1854.
Staves, jointing, machines for	Alexander Wilbur	Lancaster, Pa.	Mar. 21, 1854.
Staves, machines for crozing the ends of	George W. Livermore	Cambridgeport, Mass.	April 4, 1854. Patented in England Aug. 31, 1853.
Staves, machines for jointing	E. Valentine and A. Bradway	Monson, Hampden county, Mass.	Mar. 28, 1854.
Staves, mode of sawing bolts for	Barnet McKeage	Accatink, Va	Nov. 7, 1854.
Tenoning, &c., blind slats, machines for	Thomas G. Stagg	Jersey City, N. J.	Mar. 28, 1854.
Tenoning spokes, method of	R. L. Sibbett	Shippensburg, Pa.	Aug. 29, 1854.
Tenons, machine for cutting, on blind slats	Erastus W. Roff	Newark, N. J.	Nov. 7 1854.
Tenons, machine for cutting	Charles P. S. Wardwell	Lake Village, N. H.	Aug. 29, 1854.
Tenons, round, device in machines for cutting	Thomas R. and George Bailey	Lockport, N. Y.	July 25, 1854.
Tonguing and grooving tapering boards, device for.	John Absterdam and Wm. B. Merrill, assignors to J. A. Woodbury and William B. Merrill.	Boston, Mass. / Winchester, Mass.	Mar. 28, 1854.
Tonguing and grooving lumber, certain devices for.	Nicholas G. Norcross	Lowell, Mass.	May 2, 1854.
Turning casks, &c., from solid pieces, method of.	James P. Osborne	Staunton, N. J.	June 20, 1854.
Turning hubs, &c., method of	Smith Beers	Naugatuck, New Haven county, Conn.	June 6, 1854.
Turning hubs, tool-handles, &c., machine for	Samuel Carpenter	Flushing, N. Y.	Oct. 10, 1854.
Turning-lathe	Garret Meldrum	West Philadelphia, Pa.	April 18, 1854.
Turning-lathes	Edward Bancroft and William Sellers.	Philadelphia, Pa.	Feb. 7, 1854.
Turning-lathes	Albin Warth	New York, N. Y.	Oct. 10, 1854.

Turning-lathes, tool-rest for	George A. Rollins	Nashua, N. H	Feb. 28, 1854.
Turning-lathes, tail-stocks for	L. B. Tyng	Lowell, Mass	Mar. 7, 1854.
Turning-lathes, tool-rest for	M. H. Merriam and W. W. Nichols, assignors to W. W. Nichols & Co.	Boston, Mass	Aug. 22, 1854.
Turning prismatic forms, machine for	Milton Roberts, assignor to Roberts and Pierce.	Belfast, Me	Dec. 19, 1854.
Veneering, press for	L. A. and J. W. Brown	Hartford, Conn	Jan. 10, 1854.
Veneer, machine for scraping and toothing	Allen Goodman and Lyman Wheeler	Dana, Worcester county, Mass	Feb. 14, 1854.
Veneer polisher	Edwin Allen	South Windham, Conn	June 20, 1854.
Veneers, machine for cutting	Carmi Hart	Bridgeport, Conn	April 4, 1854.
Wash-boards, machines for nailing	James B. Holmes	Cincinnati, Ohio	Jan. 3, 1854.
Wedge-machine	G. C Jones and P. King	Whitefield, Kennebeck county, Me.	April 25, 1854.
Window-blinds, machine for making	Moses C. Stiles and T. S. Lewis	Hollis, Me	Jan. 24, 1854.

CLASS XV.—STONE AND CLAY MANUFACTURES, *including machines for pottery, glass-making, brick-making, dressing and preparing stone, cements, and other building materials.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Brick-machines	Seaman C. Ripley	New York, N. Y	Mar. 7, 1854.
Brick-machines	Thomas E. Seay	Columbia, Fluvanna county, Va	April 11, 1854.
Brick-machines	Stephen Ustick	Philadelphia, Pa	April 18, 1854; antedated Nov. 15, 1853.
Brick-machines	Francis H. Smith	Baltimore, Md	Oct. 3, 1854.
Brick-machines	Patrick S. Devlan	Reading, Pa	Oct. 3, 1854.
Brick-machines	Zachariah M. Paul	Alexandria, La	Oct. 3, 1854.
Brick-making	John C. Fr. Saloman	Washington, D. C	April 25, 1854.
Brick-moulds, hand	Clark Alvord	Syracuse, N. Y	Nov. 21, 1854.
Brick-presses	Collins B. Baker	Troy, N. Y	Aug. 1, 1854.
Brick-presses	Isaac Gregg	Pittsburg, Pa	Aug. 1, 1854.
Brick-presses	Josee Johnson	Fort Smith, Ark	Aug. 8. 1854.
Brick-presses	Alexander H. Brown	Georgetown, D. C	Sept. 5, 1854.
Brick-presses	E. D. Williams and T. Tyrell	Wilmington, Del	Oct. 17, 1854.
Bricks, &c., from slag. (See Class II, letter S.)			
Bricks, machines for making	John McMurtry	Lexington, Ky	Aug. 8, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Bricks, machines for making	R. D. Bartlett	Bangor, Me	Aug. 8, 1854.
Bricks, manufacture of	L. E. Ransom	Havana, Ohio	Oct. 31, 1854.
Bricks, mode of moulding	Nathan Johnson	Noblesville, Hamilton county, Ind.	June 20, 1854.
Drill, rock	Edwin G. Dunham	Portland, Conn	Oct. 10, 1854.
Glass furnaces	Frederick Schaum	Baltimore, Md	April 25, 1854.
Glass furnaces	Jacob Green	Philadelphia, Pa	Nov. 7, 1854.
Glass furnaces	A. K. Hay	Winslow, N. J	Nov. 7, 1854.
Glass moulds	William Brooke	Jersey City, N. J	Aug. 15, 1854.
Kilns, brick	John Speight	Baltimore, Md	July 4, 1854.
Kilns, brick and lime, controlling draught in	Joseph Leeds	Philadelphia, Pa	July 4, 1854.
Kilns, brick and pottery	Joseph Baron de Palm	Augsburg, Bavaria, Europe	June 6, 1854; patented in England July 13, 1852.
Kilns, lime	Robert Neisch	New York, N. Y	Aug. 15, 1854.
Kilns, lime	Clark D. Page	Rochester, N. Y	Feb. 7, 1854.
Marble and other substances, process of imitating. (See Class IV, letter P.)			
Pipe-couplings, moulding clay	Joseph Putnam	Salem, Mass	May 16, 1854.
Stone, applying colors to. (See Class IV, S.)			
Stone, drilling, machines for	Simon Pettes	New York, N. Y	Mar. 14, 1854.
Stone, marble, &c., machines for carving	Elias A. Swan, assignee of William J. Casselman	New York city Vernon, Onedia county, N. Y.	July 11, 1854.
Stone and marble, machines for sawing	Albert H. Tingley, assignor to himself, Edmund W., and Henry F. Tingley.	Providence, R. I	July 18, 1854.
Stone and marble saws	William Watson	New York, N. Y	Aug. 1, 1854.
Stone and metals, machines for planing	Josiah M. Smith	New York, N. Y	July 11, 1854.
Stone, carving, machinery for	Edwin Allen	South Windham, Conn	Nov. 14, 1854.
Stone, dressing, machines for	Elbridge G. Hastings	Brooklyn, N. Y	Mar. 14, 1854.
Stone-dressing machines	Charles T. Porter	New York, N. Y	Aug. 8, 1854.
Stone-dressing machines	John P. Avery, assignor to Joseph B. Bromley.	Norwich, Conn	Nov. 7, 1854.
Stone-drilling machines	Ferdinand Davison	Petersburg, Va	Nov. 7, 1854.
Stone, machines for drilling	William C. Wright	Boston, Mass	Mar. 7, 1854.
Stone, machines for dressing	William H. Robertson	Hartford, Conn	Oct. 3, 1854.

Stone, machinery for polishing	Albert Broughton	Malone, N. Y.	Nov. 7, 1854. Antedated October 24, 1854.
Stone-picking machine	John T. Foster	Jersey City, N. J.	Feb. 21, 1854.
Stone-saws	G. W. Cherry	New York, N. Y.	Aug. 1, 1854.
Stone-saws, circular	Richard Deering, sr.	Louisville, Ky	Oct. 3, 1854.
Tubes, cement or earthen, moulds for	B. S. Pierce and C. M. Pierce	New Bedford, Mass	Aug. 1, 1854.

CLASS XVI.—LEATHER, *including tanning and dressing, manufacture of boots, shoes, saddlery, harness, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Bits, bridle	Ebenezer N. Price	Salem, Mass	June 13, 1854.
Boot counters, machines for cutting and skiving.	Varaness Snell	North Bridgewater, Plymouth county, Mass.	April 25, 1854.
Boot and shoe soles of gutta percha or India rubber, manufacture of.	E. C. Hyatt and C. Meyer	Milltown, N. J	Jan. 17, 1854.
Boot and shoe soles, machine for cutting	Luther and Potter G. Ross	Worcester, Mass	Aug. 8, 1854.
Boot and shoe soles, machines for cutting	John Thompson and A. S. Moore	Marblehead, Mass Lynn, Mass	Aug. 8, 1854. Antedated February 8, 1854.
Boot-crimping machines	Grey Utley	Chapel Hill, N. C	Dec. 19, 1854.
Boot-soles, machines for cutting out	Luther Hill, assignor to Luther Hill and Lorenzo Stratton.	Stoneham, Mass	June 20, 1854.
Boots and shoes	Nathaniel Colver	Detroit, Mich	Sept. 12, 1854.
Boots and shoes, machines for pegging	Halvor Halvorson	Hartford, Conn	Jan. 10, 1854.
Boots and shoes, machines for pegging	John J. Greenough	New York, N. Y	Jan. 17, 1854.
Boots and shoes, machines for pegging	John Standish, assignor to John Standish and H. A. Miller.	Cuyahoga Falls, Summit county, Ohio.	Feb. 14, 1854.
Boots and shoes, machines for pegging	Leander Lackey	Sutton, Worcester county, Mass.	May 16, 1854.
Boots and shoes, machines for pegging	A. C. Gallahue	New York, N. Y	July 11, 1854.
Boots and shoes, machines for pegging	George J. Wardwell, assignor to G. J. Wardwell and Elmer Townsend.	Andover, Me	July 18, 1854.
Boots and shoes, machines for pegging	John A. Bradshaw	Lowell, Mass	Aug. 15, 1854.
Boots and shoes, machines for pegging	William Kidder, assignor to W. Kidder and N. Hunt.	Newburyport, Mass	Aug. 15, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Boots, shoes, &c., instrument for trimming welts of.	Lyman Clark, assignor to Clark and Sawyer	South Royalton, Mass	June 13, 1854.
Brushes, painters'	John S. Martin	Boston, Mass	June 20, 1854.
Buckles	William W. Smith	Marshall, Calhoun county, Mich	July 8, 1854.
Buckles, manufacture of	Sheldon S. Hartshorn	Orange, Conn	Nov. 7, 1854.
Cans for holding liquids	Lyman Jennings	Erving, Mass	Oct. 10, 1854.
Collars, horse, blocks for	Lewis S. Davis	New Paris, Ohio	Feb. 7, 1854.
Collars, horse, stuffing	John W. Howell	New Paris, Preble county, Ohio	Feb. 14, 1854.
Cutters, heel	Alfred D. Kelley	Rochester, Strafford county, N. H.	June 27, 1854; antedated Mar. 20, 1854.
Goods, elastic	Edward Brown	Rindge, N. H	Sept. 26, 1854.
Hame fastenings	Edward Turner	Baltimore, Md	Aug. 8, 1854.
Harness, from horses, apparatus for detaching.	Samuel Hunt	Baltimore, Md	July 11, 1854.
Harness, saddles	Robert M. Selleck	New York, N. Y	Nov. 7, 1854.
Hose, machinery for punching rivet-holes in	John R. Hague	Pittsburg, Penn	July 4, 1854.
Lasting, instruments	Thomas Daugherty	Erie, Erie county, Penn	Aug. 1, 1854.
Lasts, shoe	Thomas Daugherty	Erie, Erie county, Penn	Mar. 21, 1854.
Leather banding for machinery, manufacturing.	George Miller	Providence, R. I	Nov. 7, 1854.
Leather, machines for polishing	Philip P. Tapley	Lynn, Mass	Jan. 3, 1854.
Leather-splitting machines	Joseph F. Flanders and Jeremiah A. Marden.	Newburyport, Essex county, Mass.	Aug. 29, 1854.
Leather-splitting machines	Elisha Pratt, assignor to Elisha Pratt and H. P. Upton.	Salem, Mass	Dec. 19, 1854.
Riving machine	A. Kendall	Cleveland, Ohio	Sept. 5, 1854.
Saddle trees	George B. Ambler	Trumbull, Fairfield county, Conn.	Feb. 14, 1854.
Saddle trees	William E. Jones	United States army, U. S	June 13, 1854.
Saddle trees, fastening skirts to	Julius C. Dickey	Sandy Hill, Washington county, N. Y.	Aug. 29, 1854.
Saddle trees, harness	Robert Spencer	New York, N. Y	Aug. 22, 1854.
Saddles, harness	Robert Spencer	New York, N. Y	Aug. 22, 1854.
Shoe horns	Louis Schwingrouber	New York, N. Y	Aug. 1, 1854.
Shoes, &c., machines for stretching	Alfred Burwell	Rochester, N. Y	July 11, 1854

Shoemakers' edge planes	D. W. Horton	Petersburgh, Ind	Oct. 17, 1854.
Tanning	Roswell Enos	Woodstock, Ill	July 18, 1854.
Tanning apparatus, construction of	Nathaniel Dodge	Orford, N. H	June 13, 1854.
Tanning, composition for	George Reynolds	Bangor, Maine	Dec. 19, 1854.

Class XVII.—Household furniture, *machines and implements for domestic purposes, including washing-machines, bread and cracker-machines, feather-dressing, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Apples, machines for paring	John D. Seagrave	Milford, Worcester county, Mass.	April 18, 1854.
Bath, shower	D. P. Baldwin	San Francisco, Cal	May 16, 1854.
Bed bottoms	Benjamin R. Hundley	Lynchburg, Ohio	June 13, 1854.
Bed bottoms	Tyler Howe	Cambridgeport, Mass	June 13, 1854.
Bed bottoms, spring	William H. Meriwether	New Braunfels, Texas	Aug. 8, 1854.
Bed, spring, bottoms	Wendell Wright	New York, N. Y.	Dec. 19, 1854.
Bedstead fastenings	William H. Price	Philadelphia, Pa	Jan. 3, 1854.
Bedstead fastenings	Eastman R. Ball	Kalamazoo, Mich	April 4, 1854.
Bedstead fastenings	R. H. St. John	Columbus, Ohio	July 11, 1854.
Bedstead fastenings	John Drayton	Buffalo, N. Y.	Sept. 26, 1854.
Bedstead, invalid	C. D. Van Allen	New York, N. Y.	April 25, 1854.
Bedsteads	John H. Barth	Indianapolis, Ind	Jan. 10, 1854.
Bedsteads	Simon Willard	Cincinnati, Ohio	Aug. 1, 1853.
Bedsteads, chair, portable folding	George H. Cottam	Hampstead Road, Middlesex co., England.	April 25, 1854. Patented in England Oct. 5, 1852.
Bedsteads, crib, &c., sofas	Thos. W. Currier	Lawrence, Essex county, Mass.	July 4, 1854.
Bedsteads for invalids	J. T. Forbes	Coburg, Canada West.	Aug. 29, 1854.
Bedsteads; portable	Simon Willard	Cincinnati, Ohio	July 25, 1854.
Bedsteads, sofa	Charles F. Martine	Boston, Mass	June 6, 1854.
Bedsteads, sofa	Stanislas Millet	New York, N. Y.	Aug. 8, 1854.
Breast cups	E. Waters	Troy, N. Y.	Aug. 29, 1854.
Bristles, machines for cleaning and assorting	George E. Burt, assignor to George E. Burt and David C. Butterfield.	Westford, Mass	Feb. 7, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Britannia tea and coffee pots	Robert W. Andrews	Staffordville, Conn	Mar. 7, 1854.
Brooms, manufacture of	William B. Walker	Bennington, N. H	Aug. 1, 1854
Brushes, manufacture of	Mathew Stewart	Philadelphia, Pa	Dec. 5, 1854.
Bureaus, portable	Levi Heywood, J. L. Ross, and Jas. K. Otis	Boston, Mass	Aug. 22, 1854.
Butter, machine for weighing and printing	Wm. S. Reinert	Spring Garden, Phila. county, Pa.	May 9, 1854.
Butter workers	Ezekiel Gore	Bennington, Vt	July 25, 1854.
Butter workers	Elihu Ring	Mechlenburg, N. Y	July 25, 1854.
Cans, preserve, sealing	Henry C. Nicholson and James Spratt	Cincinnati, Ohio	Jan. 3, 1854.
Carpets, securing to floors	Enoch Jackman	Portland, Conn	Dec. 12, 1854.
Casters, furniture	Le Roy S White	Chicopee, Hampden county, Mass.	Jan. 31, 1854.
Casters, furniture	L. S. White, assignor to B. Lathrop and P. B. Tyler	Chicopee, Mass Springfield, Mass	Aug. 8, 1854.
Casters, furniture, rollers of	P. B. Tyler and Benjamin Lathrop	Springfield, Mass	Aug. 8, 1854.
Chair, cane	Rufus Porter	Washington, D. C	July 11, 1854.
Chair frames	Moses E. Halsey	New York, N. Y	Sept. 26, 1854.
Chairs, portable, head-rest for	C. P. Bailey	Zanesville, Ohio	Mar. 28, 1854.
Clothes, apparatus for drying	Stephen Woodward, assignor to S. Woodward, Joseph P. Nelson, and A. C. Carroll.	Sutton, N. H	Nov. 21, 1854.
Clothes-clamp	William H. Towers	Philadelphia, Pa	Nov. 21, 1854.
Clothes-horse, towel stand or	John Cram	Boston, Mass	Nov. 28, 1854.
Clothes-lines, spring clasps for	E. S. Haskins	Boston, Mass	Mar. 14, 1854.
Clothes-pins, machine for slitting	John B. Smith	Sunapee, Sullivan county, N. H	Feb. 21, 1854.
Coffee-mills	Charles H. Beatty	Wheeling, Va	June 27, 1854.
Coffee-pots	James Macgregor, jr	Troy, N. Y	April 11, 1854.
Crackers, machines for moulding	Phineas Emmons	New York, N. Y	Aug. 1, 1854.
Curtain fixtures	Don Carlos Smart	Cambridgeport, Mass	Sept. 12, 1854.
Curtain fixtures	Silas S. Putnam	Boston, Mass	Oct. 3, 1854.
Curtains, &c., window, spring rollers for	Benjamin Bray	Salem, Mass	Sept. 5, 1854.
Curtains, musquito	Benjamin B. Webster	Boston, Mass	Oct. 3, 1854.
Fans, revolving, for apartments	Louis Stein	New York, N. Y	Dec. 19, 1854.
Freezers, ice-cream	Thomas M. Powell	Baltimore, Md	Sept. 5, 1854.

Graters, nutmeg	William Bradley	Lynn, Mass	July 25, 1854.
Hat shapers	Adolphe and Felix Brown	New York, N. Y	July 4, 1854.
Iron, smoothing, rotary	J. W. Brown, assignor to Samuel M. Folsom	Hartford, Conn Charlestown, Mass	Mar. 21, 1854.
Irons, smoothing, heaters for	James J. Johnston	Alleghany City, Pa	Jan. 10, 1854.
Irons, smoothing, self-heating	John Johnston	Alleghany City, Penn	Jan. 10, 1854.
Irons, smoothing, self-heating	Charles A. Read	Waterloo, Seneca county, N. Y.	May 16, 1854.
Irons, smoothing, self-heating	Peter S. Howes	Boston, Mass	May 16, 1854.
Irons, smoothing, self-heating	William Wickersham	Boston, Mass	Aug. 8, 1854.
Liquids, vessels for holding	James H. Stimpson, executor of Jas. Stimpson, deceased.	Baltimore, Md	Oct. 17, 1854; antedated April 17, 1854.
Meat, mincing, machine for	Abraham McInturff	Liberty, Va	Jan. 17, 1854.
Milk strainer	Joel Gleason	Geneva, N. Y	July 4, 1854.
Oyster-knife	Philos Blake	New Haven, Conn	April 18, 1854.
Oysters, &c., cooking	Lawson P. Keach	Baltimore, Md	April 18, 1854.
Oysters, opening, machine for	Wm. H. Towers	Philadelphia, Penn	April 18, 1854.
Palliasses, apparatus for making	James Pigot	Brooklyn, N. Y	May 23, 1854.
Pans, sauce	Henry Farson David	Ipava, Ill	Nov. 21, 1854.
Potato-washing machine	J. H. Fairchild and Sylvanus Richardson	Jericho, Chittenden county, Vt.	April 18, 1854.
Sausage stuffers	John J. Weeks	Buckram, N. Y	Sept. 19, 1854.
Stands, reading and writing	Enoch Hidden	New York, N. Y	July 4, 1854.
Table and chair combined	Stephen Hedges	New York, N. Y	April 4, 1854.
Tables	Charles Rowland	Belleville, Ill	Sept. 5, 1854.
Tables, reading	Charles Folson	Cambridge, Mass	July 25, 1854.
Tea-pots, casting the spouts of	Tiebe and Muhle, assignors to Tiebe, Muhle & Homan.	Cincinnati, Ohio	Dec. 12, 1854.
Wash-boards	Philip H. Keck	Morgantown, Va	July 4, 1854.
Wash-boards	Jos. Hyde	New York, N. Y	Aug. 1, 1854.
Washing machines	William Cummingham	Holliday's Cove, Va	Jan. 24, 1854.
Washing machines	H. C. Stevenson	Georgetown, Ky	July 18, 1854.
Washing machine	William Biddle	Lafayette, Ind	Aug. 29, 1854.
Washing machines	Joel Wisner	Aurora, N. Y	Sept. 26, 1854.
Washing machines	Moses D. Wells	Morgantown, Va	Sept. 26, 1854.
Washing machines	William Wheeler	Acton, Mass	Nov. 28, 1854.
Wash-stands	W. H. Miller	Braudenburgh, Ky	Dec. 5, 1854.

Classified list of patents issued—Continued.

CLASS XVIII.—ARTS, POLITE, FINE, AND ORNAMENTAL, *including music, painting, sculpture, engraving, books, paper, printing, binding, jewelry, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Accordeons	Anthony Faas	Philadelphia, Pa	June 13, 1854.
Bank notes, table to hold, when cut	Frank G. Johnson	Brooklyn, N. Y	Feb. 28, 1854.
Board, paste, machinery for making	Orin W. Fiske	Dedham, Mass	July 11, 1854.
Boards, book-binders', drying	Jas. H. Longbotham	Brooklyn, N. Y	Jan. 3, 1854.
Book covesr, machine for making	Loring Danforth	Buffalo, N. Y	May 23, 1854.
Books, apparatus for turning the leaves of	Claude Desbeaux	Paris, France	Jan. 3, 1854.
Books, apparatus for turning the leaves of	H. C. Brigham, of New London, and Jas. M. Stewart.	Norwich, Conn	Sept. 12, 1854.
Books, blank, machinery for paging	J. L. Burdick	New York, N. Y	Feb. 14, 1854.
Books, machine for paging	Edward Town	Jersey City, N. J	Jan. 31, 1854.
Books, machine for paging	H. S. Taylor	Springfield, Mass	May 16, 1854.
Books, machine for paging	Henry Hochstrasser	Philadelphia, Pa	Sept. 26, 1854.
Books, machine for rounding the backs of	Leonard F. Markham	Cambridge, Mass	Dec. 5, 1854.
Bracelet, clasp	John Mansure, assignor to Farr & Thompson	Philadelphia, Pa	May 23, 1854.
Daguerreotype cases, &c., apparatus for the manufacture of.	Henry T. Anthony and Frank Phœbus	New York, N. Y	May 23, 1843.
Daguerreotype cases, manufacture of	Samuel Peck	New Haven, Conn	Oct. 3, 1854.
Daguerreotype plate holder	Philander H. Benedict	Syracuse, N. Y	Jan. 31, 1854.
Daguerreotype plate holder	Reuben Knecht	Easton, Northampton county, Pa.	Feb. 7, 1854.
Daguerreotype plate holder	Joseph Hill	Skaneateles, N. Y	Aug. 22, 1854.
Daguerreotype plates, apparatus for polishing	Benjamin F. Upton	Bath, Maine	Sept. 19, 1854.
Daguerreotype plates, apparatus for cleaning and buffing.	Thomas Longking	Brooklyn, N. Y	Jan. 31, 1854.
Daguerreotype, cameras for taking stereoscope or other.	Silas A. Holmes	Brooklyn, N. Y	May 30, 1854.
Daguerreotypes for stereoscopes, taking	Albert S. Southworth and Josiah J. Hawes	Boston, Mass	July 11. 1854.
Ear-rings, fastening for	George E. Higgins	Syracuse, N. Y	May 16, 1854.
File or holder, document	Henry E. Woodbury	Washington, D. C	Aug. 8, 1854.
Guitars	Wm. B. Tilton	New York, N. Y	Jan. 3, 1854.

Guitars	Wm. H. Towers	Philadelphia, Pa	May 16, 1854.
Gilding or plating fibrous substances	A. Hock	Paris, France	Mar. 14, 1854, patented in France Dec. 15, 1852.
Inkstands, the construction of	Robert T. Fry	Spring Garden, Philadelphia, Pa.	July 4, 1854.
Melodeons	Orange N. Frary	Ansonia, Conn	Aug. 8, 1854.
Miniature cases, presses for making	Henry T. Anthony	New York, N. Y	Jan. 31, 1854.
Monuments, mode of fixing likenesses in	William Boyd	Garretsville, Ohio	Jan. 31, 1854.
Musical instrument, reed, construction of	F. A. Gleason	Rome, N. Y	June 20, 1854.
Musical instruments, reed boxes for	Mervin T. Lundfear	Manchester, Hartford co., Conn	May 2, 1854.
Musical instrument, wind, valve for	C. N. Eisenbrandt	Baltimore, Md	July 4, 1854.
Musical stringed instruments	Geo. L. Wild	Baltimore, Md	Sept. 5, 1854.
Organs	William Sumner	Worcester, Mass	Feb. 28, 1854.
Paging-machine	George Hodgkinson	Cincinnati, Ohio	Nov. 14, 1854.
Painting window blinds, &c., apparatus for	Samuel T. Field	Worcester, Mass	April 18, 1854.
Paper wetting	William Overend	Cincinnati, Ohio	Jan. 24, 1854.
Papering walls	Henry F. Baker	Centreville, Ind	Nov. 21, 1854.
Pen	W. R. Glover	Glasgow, Ky	Aug. 1, 1854.
Pen and pencil-case	Jacob J. Hatcher	Philadelphia, Pa	July 11, 1854.
Pen and pencil-case	Jacob J. Lownds	New York, N. Y	Oct. 3, 1854.
Pen and pencil-case	John Mabie	English Neighborhood, Bergen county, N. J.	Oct. 3, 1854.
Pen and pencil-case	John Richardson	New York, N. Y	Oct. 17, 1854.
Pen and pencil-case	John Richardson	New York, N. Y	Oct. 31, 1854.
Pen and pencil-case, sliding	John H. Runch	New York, N. Y	Oct. 24, 1854.
Pen and pencil-cases	John Richardson	New York, N. Y	Oct. 24, 1854.
Pen-holder	Phineas Myer	New York, N. Y	Oct. 24, 1854.
Pencils for drawing-machines, arrangement of	Mighill Nutting	Portland, Maine	Nov. 21, 1854.
Pens, fountain	William Cleveland	Orange, N. J	Jan. 31, 1854.
Photographic pictures, composition for making	Jas. A. Cutting	Boston, Mass	July 11, 1854.
Photographic pictures on glass	James A. Cutting	Boston, Mass	July 11, 1854.
Photographic pictures, the preparation of collodion for.	James A. Cutting	Boston, Mass	July 4, 1854.
Photographic plate vice	C. W. Stimpson	Cleveland, Ohio	Jan. 17, 1854.
Piano forte actions	Alexander Hall	Lloydstown, Belmont county, Ohio.	April 11, 1854.
Piano forte actions	Elon A. Lee	Roxbury, Norfolk county, Mass	May 23, 1854.
Piano forte actions	Daniel H. Shirley	Boston, Mass	Nov. 28, 1854.
Piano forte, iron frame upright	Stephen P. Brooks	Boston, Mass	April 11, 1854.
Piano forte stools	Levi Van Hoesen, assignor to New Haven Iron Railing Company.	New Haven, Conn	Oct. 3, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Piano fortes	Alexander Hall	Lloydsville, Ohio	Jan. 24, 1854.
Piano fortes, attachment to	Spencer B. Driggs	Detroit, Mich	Jan. 24, 1854.
Piano fortes, key for tuning	Abraham Bassford	New York, N. Y.	Oct. 31, 1854.
Piano fortes, swell mute, attachment to	Albert G. Corliss	Portland, Me	April 11, 1854.
Polygraph	Nathan Ames	Saugus, Mass	Dec. 12, 1854.
Polygraphs	Nathan Ames	Saugus, Mass	Dec. 12, 1854.
Press, copying	Calvin Adams	Pittsburg, Penn	Jan. 24, 1854.
Press for printing in colors	A. M. & G. H. Babcock	Westerly, R. I.	Oct. 31, 1854.
Press, hand	B. Franklin Day	Philadelphia, Penn	Aug. 15, 1854.
Press, printing	Ervin B. Tripp	Concord, N. H.	Oct. 3, 1854.
Printers' forms, locking up	E. H. Sprague	Zanesville, Ohio	June 13, 1854.
Printers' frisket	Andrew Overend	Philadelphia, Penn	June 13, 1854.
Printing blocks, construction of	Benjamin Underwood	Brooklyn, N. Y	June 31, 1854.
Printing blocks, method of constructing moulds for making.	James Berry	Roxbury, Mass	Mar. 14, 1854.
Printing blocks, method of making	Thomas Crossley	Boston, Mass	July 18, 1854.
Printing blocks, method of constructing	Leon Jarosson	Jersey City, N. J	Nov. 14, 1854.
Printing cylinders, method of operating the doctors of.	James Baxendale, assignor to J. Baxendale & J. Ferguson.	Fall River, Mass	Mar. 28, 1851.
Printing long-napped fabrics, process for	William A. White	Roxbury, Mass	Aug. 15, 1854.
Printing paper, machine for damping	Andrew Overend	Philadelphia, Penn	Mar. 14, 1854.
Printing, polychromatic, method of forming plates for.	John Donlevy	New York, N. Y.	Jan. 3, 1854.
Printing press	George P. Gordon	New York, N. Y	June 13, 1854.
Printing presses	Stephen P. Ruggles	Boston, Mass	Feb. 28, 1854.
Printing-presses, apparatus for feeding paper to	W. Kuhlerschmidt and W. Hauff	New York, N. Y.	April 25, 1854.
Printing-presses, attaching blankets to cylinders for.	Wm. H. Street	New York, N. Y	May 16, 1854.
Printing-press, hand	Henry Underhill	Canandaigua, Ontario co., N. Y.	Mar. 28, 1854.
Printing-presses, machine for feeding paper to.	Bradford A. Rugg and Ezra H. Benjamin	Oak Hill, Green county, N. Y.	Sept. 5, 1854.
Printing-presses, machines for feeding paper to.	William F. Collier, assignor to Wm. F. Collier and Joseph Boyden.	Worcester, Mass.	June 27 1854.

Printing-presses, machines for feeding sheets of paper to.	Henry Clark	New Orleans, La	April 25, 1854.
Printing-presses, mode of operating the feed-tables of.	George Little	Utica, Onedia county, N. Y	April 25, 1854.
Printing-presses, nippers for	Charles W. Hawkes	Boston, Mass	Mar. 21, 1854.
Printing woollen and other goods, machine for	Thomas Crossley	Boston, Mass	July 18, 1854.
Printing upon glass, process of engraving or	M. D. & L. W. Whipple, assignors to Lyman W. Whipple and Robert B. Fitts.	Somerville, Middlesex co., Mass.	June 27, 1854.
Print subscribers' names, &c., on newspapers, machines to.	Edward P. Day	New York, N. Y	June 6, 1854.
Printing railway and other tickets, machine for.	Jos. Edmonson and Caleb Haworth, executors of Thomas Edmonson, deceased.	Salford, Lancaster co., England	May 23, 1854. Patented in England March 19, 1850.
Ruling-machine	John Collman	Silver Creek, Ill	Jan. 3, 1854.
Ruling paper, machines for	John & Wm. McAdams	Boston, Mass	Feb. 7, 1854.
Ruling paper, mode of setting and holding pens for.	J. V. Collins, assignor to	Charlestown, Mass.	June 20, 1854.
	W. O. Hickok	Harrisburg, Pa.	
Slate-frames	Edmund Morris	Burlington, N. J	June 20, 1854.
Stereotype composition, gutta percha	Julius Herriet, assignor to John Gaylord Wells, of Hartford, Conn.	New York, N. Y	Oct. 24, 1854.
Stereotype pans	Richard D. Mott	Spring Garden, Philadelphia, Pa.	Mar. 28, 1854.
Tuning-forks	Joseph C. Jinkins	Beallsville, Ohio	Aug. 22, 1854.
Type, casting	George Bruce	New York, N. Y	Nov. 14, 1854.
Type, casting, machines for	Charles Muller	New York, N. Y	Jan. 3, 1854.
Type composing, machinery for	William H. Mitchel	Brooklyn, N. Y	May 16, 1854.
Type, machines for rubbing	Daniel Moore, assignor to Geo. S. Cameron	New York, N. Y	Mar. 21, 1854.
Types, machines for distributing	Victor Beaumont	New York, N. Y	Mar. 21, 1854.
Typograph	Robert S. Thomas	Wilmington, N. C	May 30, 1854.
Violins	Sewall Short	New London, Conn	May 2, 1854.

Classified list of patents issued—Continued.

CLASS XIX.—FIRE-ARMS AND IMPLEMENTS OF WAR, *and parts thereof, including the manufacture of shot and gunpowder.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Bombs, shells, or grenades	Elliot T. Miller	Boston, Mass.	Nov. 7, 1854.
Bullet moulds	William M. Storm	New York, N. Y.	April 25, 1854.
Cannon, breech-loading	William E. Osborn	Milton, N. Y.	Sept. 12, 1854.
Cartridges	Horace Smith and Daniel B. Wesson	Norwich, Conn	Aug. 8, 1854.
Cartridges for breech-loading fire-arms	Daniel Moore	Williamsburg, N. Y.	Oct. 31, 1854.
Fire-arms	Thomas Cook, assignor to Starkie Livesey	New York, N. Y.	Feb. 14, 1854.
Fire-arms	Horace Smith and Daniel B. Wesson	Norwich, Conn	Feb. 14, 1854.
Fire-arms	Charles Buss	Marlboro', Cheshire county, N. H.	April 25, 1854.
Fire-arms	Jeremiah Peck, assignor to J. Peck and C. F. Grilley.	New Haven, Conn	May 16, 1854.
Fire-arms	Eden A. Baldwin 2d, administrator of E. Baldwin, deceased.	Shelburne Falls, Mass.	July 11, 1854.
Fire-arms	Eli Whitney	Whitneyville, Conn	Aug. 1, 1854.
Fire-arms	Isaac W. Brown	West Springfield, Mass.	Aug. 8, 1854.
Fire-arms	Joseph C. Day	Hackettstown, N. J.	Aug. 8, 1854.
Fire-arms	Daniel Knight	Salem, Ind.	Aug. 8, 1854.
Fire-arms	William A. Sweet	Pompey, N. Y.	Aug. 15, 1854.
Fire-arms	W. H. Morrison	Indianapolis, Ind.	Sept. 19, 1854.
Fire-arms	Fordyce Beals	New Haven, Conn	Sept. 26, 1854.
Fire-arms	John Hollingsworth and Ralph S. Mershon	Zanesville, Ohio	Oct. 3, 1854.
Fire-arms	Gustav F. Palmié and P. H. Palmié	Berlin, Prussia	Oct. 24, 1854.
Fire-arms	John C. Howe	Milwaukie, Wis.	Oct. 31, 1854.
Fire-arms	Wendell Wright	New York, N. Y.	Nov. 7, 1854.
Fire-arms, breech-loading	J. Durrell Greene	Cambridge, Mass.	Jan. 3, 1854.
Fire-arms, breech-loading	Henry W. Adams	New York, N. Y.	Sept. 19, 1854.
Fire-arms, breech-loading	Abner N. Newton	Richmond, Ind.	Sept. 19, 1854.
Fire-arms, breech-loading	Francis Maton	New York, N. Y.	Nov. 14, 1854.
Fire-arms, breech-loading	A. D. Perry	Newark, N. J.	Nov. 28, 1854. Patented in England June 3, 1854.
Fire-arms, breech-loading	Abner N. Newton	Richmond, Wayne county, Ind.	June 27, 1854.

Fire-arms, chargers for	William M. Storm	New York, N. Y.	May 2, 1854.
Fire-arms, chargers for	T. H. Peavey	South Montville, Waldo co., Me.	June 27, 1854.
Fire-arms, breech-loading	J. D. Greene	Cambridge, Mass.	June 27, 1854. Patented in England May 12, 1854.
Fire-arms, machine for boring the chambers in the cylinders of.	E. K. Root	Hartford, Conn.	Nov. 28, 1854.
Fire-arms, primer for	Abner N. Newton	Richmond, Ind.	May 23, 1854.
Fire-arms, revolving	Josiah Ells	Pittsburg, Pa.	April 25, 1854.
Fire-arms, revolving breech	Josiah Ells	Pittsburg, Pa.	Aug. 1, 1854.
Flask, powder, for breech-loading guns	Daniel Moore	Williamsburg, N. Y.	Oct. 31, 1854.
Locks, gun	James Hults	Berlin township, Delaware county, Ohio.	May 16, 1854.
Shot pouches	John M. Hathaway	New York, N. Y.	Aug. 1, 1854.

Class XX.—Surgical and medical instruments, *including trusses, dental instruments, bathing apparatus, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Amputating apparatus	George W. Griswold	Carbondale, Pa.	Jan. 17, 1854.
Chairs, dental	A. M. Asay	Philadelphia, Pa.	Feb. 7, 1854.
Chairs for exercising	Joshua Stevens	Chicopee Falls, Hampden county, Mass.	Aug. 29, 1854.
Forceps, surgical	Joseph G. Loomis, Mary Ann Loomis, executrix of and assignor to W. A. Gardiner.	Philadelphia, Pa.	Nov. 21, 1854.
Inhaling apparatus	Samuel H. T. Tilghman	Snow Hill, Md.	Nov. 21, 1854.
Legs, artificial	David B. Marks	New York, N. Y.	Mar. 7, 1854.
Obstetrical supporters	Westel S. Daniels	Panama, Chautauque co., N. Y.	Mar. 14, 1854.
Pump, breast	Orwell H. Needham	New York, N. Y.	June 20, 1854.
Pumps, saliva	F. Davison	Liberty, Va.	Jan. 17, 1854.
Pestle with the mortar, arrangement of	Platt C. Ingersoll	Elmira, N. Y.	May 9, 1854.
Splints, surgical	Smith A. Skinner	Brownington, Vt.	May 16, 1854.
Supporters, catamenial	Alfred A. Starr	New York, N. Y.	Aug. 22, 1854.
Syringes, enema	Morris Mattson	Boston, Mass.	April 4, 1854.
Syringe, eye-bath	Simeon Towle	Corfu, Genesee county, N. Y.	April 25, 1854.
Tape-worm operation	Alpheus Myers, M. D.	Logansport, Ind.	Nov. 14, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Teeth, artificial, plates for	Mahlon Loomis	Cambridgeport, Middlesex county, Mass.	May 2, 1854.
Teeth, artificial, palate for	Lorenze Simonds	Boston, Mass	Sept. 12, 1854.
Tonsil instruments	Ira Warren	Boston, Mass	Jan. 17, 1854.
Trap, tape-worm	Alpheus Myers, M D	Logansport, Ind	Nov. 14, 1854.
Trusses	Lewis B. White	Moscow, N. Y	Jan. 17, 1854.
Trusses	Seymour N. Marsh	New York, N. Y	Sept. 12, 1854.
Tube, inhaling	Daniel Minthorn	New York, N. Y	June 27, 1854.

Class XXI.—Wearing apparel, articles for the toilette, &c., *including instruments for manufacturing.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Bonnet-frames, moulds for pressing	Nathaniel Spence	New York, N. Y	Nov. 28, 1854. Antedated Nov. 10, 1854.
Bonnet-frames, wire, mode of constructing	Henry Weed	Philadelphia, Pa	June 27, 1854.
Bonnet-fronts, moulds for pressing	Whitten E. Kidd	New York, N. Y	Nov. 28, 1854.
Button-hole cutters	Thos. W. Brown, assignor to Wm. W. Mead	Boston, Mass	May 23, 1854.
Buttons, metallic, ornamenting	Hiram W. Hayden	Waterbury, Conn	July 11, 1854.
Buttons, wooden, manufacture of	L. L. and A. L. Platt	Newton, Fairfield county, Conn	June 27, 1854.
Carpet-bags	Frederick J. Thring	New York, N. Y	Jan. 31, 1854.
Cloth, machine for cutting out	John Harraday	New York, N. Y	May 30, 1854. Patented in England Jan. 20, 1854.
Eyelet-machine	Hymen L. Lipman	Philadelphia, Pa	June 6, 1854.
Eyelet-machine	Hymen L. Lipman	Philadelphia, Pa	July 11, 1854.
Eyelet-machine	Hymen L. Lipman	Philadelphia, Pa	July 25, 1854.

Garments, cutting, apparatus for laying off the scye in.	Peter Spilman	Richmond, Va.	July 18, 1854.	
Garments, fastenings for	Thomas J. Harris, jr.	New York, N. Y.	Oct. 3, 1854.	
Garments, fastenings for	Richard Oliver	New York, N. Y.	Oct. 10, 1854.	
Hat-shapers	Adolph and Phelix Brown	New York, N. Y.	July 11, 1854.	
Hats, felt	J. W. Whittal and William W. Pendleton	Greenwich, Conn.	Aug. 1, 1854.	
Hats, finishing palm-leaf. (See Class III.)				
Hooks and eyes	J. H. Fairchild	Jericho, Chittenden county, Vt.	May 30, 1854.	
Pins, diaper	J. Rabbeth	East Hartford, Conn.	July 11, 1854.	
Shirt-collars	Walter Hunt	New York, N. Y.	July 25, 1854.	
Suspender ends, manufacturing	Julius Hotchkiss	Waterbury, Conn.	July 27, 1854.	
Tailors' measure	Warren and Chas. F. Lillibridge	Zanesville, Ohio	Oct. 31, 1854.	
Tailors' measures	Moses T. Rowland	Pittston Ferry, Luzerne county, Pa.	April 18, 1854.	
Tailors' measuring instruments	John M. Krider	Newtown, Stephensburg, Va.	Oct. 31, 1854.	
Tailors' shears	Joseph Phares	Cincinnati, Ohio	Sept. 12, 1854.	
Toilet glass, joint for	Henry Wayne	Cincinnati, Ohio	Oct. 17, 1854.	
Umbrella-covers, hemming and cording	Sherburn C. Blodgett	Philadelpnia, Pa.	Jan. 3, 1854. July 3, 1853.	Antedated
Umbrellas, folding	H. Richardson, S. Morris, jr., and B. C. Perry.	Litchfield, Conn.	Aug. 22, 1854.	

Class XXII.—*Miscellaneous.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Anglers' combined float and sinker	J. W. Hoard	Providence, R. I.	Dec. 12, 1854.
Bells, alarm, magnetic	Augustus Eckert	Trenton, Ohio	Oct. 10, 1854.
Bells, horse	Jason Barton	Middle Haddam, Middlesex county, Mass.	Feb. 14, 1854.
Bells, horse, mode of attaching to straps	Jason Barton	Middle Haddam, Middlesex county, Mass.	Feb. 21, 1854.
Bells, mode of hanging	Jerome B. Young	Harper's Ferry, Va.	July 4, 1854.
Bells, mode of ringing by steam	George B. Snow	Buffalo, N. Y.	July 11, 1854.
Bottles	R. Boeklen and H. T. Brown	Jersey City, N. J.	July 25, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Bottles	William Clark	New York, N. Y	July 25, 1854.
Bottles, closing the mouths of, air-tight	Robert Arthur	Washington, D. C	Aug. 15, 1854.
Bottles, corking, apparatus for	John Matthews, assignee of Thomas W. Gillett	New York, N. Y New Haven, Conn	July 11, 1854.
Bottles, machines for washing	A. R. Rauch	Bethlehem, North Hampton county, Pa.	June 6, 1854.
Bottle stoppers	Thomas Kendall	San Francisco, Cal	Nov. 7, 1854.
Burglar's alarm	D. E. McDougall	Springfield, Mass	June 20, 1854.
Bottles, mineral water, stopping	Alphonse Quantin	Philadelphia, Pa	July 25, 1854.
Burglar's alarm	Ephraim Brown	Lowell, Mass	Oct. 31, 1854.
Burglar's alarm	Junius Foster	Green Point, N. Y	Oct. 31, 1854.
Clasps	Charles T. P. Ware, assignor to D. C. Morehead.	New York, N. Y	Jan. 17, 1854.
Coffins	John McF. Lyeth	Baltimore, Md	June 27, 1854.
Coffins	Philo Washburn, Harrison G. O. White, and George A. Copeland.	Taunton, Mass	June 27, 1854.
Coffins	John Good	Philadelphia, Pa	Dec. 12, 1854.
Dock-holders, for horses	Elbridge H. Penfield	Middletown, Conn	Dec. 12, 1854.
Docks, of horses, machine for holding	Seymour Tomlinson	Pleasant Valley, Dutchess county, N. Y.	July 18, 1854.
File or bill-holder	Thomas W. Brown	Boston, Mass	April 25, 1854.
Fire-escape	George W. Keller	Philadelphia, Pa	April 18, 1854.
Fire-escape, portable ladder or	Thomas Armitage	Philadelphia, Penn	April 18, 1854.
Fish-hooks	Henry Sigler	Houston, Texas	April 11, 1854.
Fish-hooks, and artificial baits, attachment for.	Julio T. Buell	White Hall, Washington county, N. Y.	April 11, 1854.
Fishing rods and floats	Charles De Saxe, assignor to Thomas H. Bate.	New York, N. Y	April 18, 1854.
Fly trap	David and Samuel K. Flanders	Parishville, St. Lawrence county, N. Y.	April 18, 1854.
Fountain, soda-water	James R. Nichols	Haverhill, Mass	July 25, 1854.
Grindstone frame	J. L. Lord	Chester, Conn	Aug. 15, 1854.

Hones	Isaac Babbitt	Roxbury, Norfolk county, Mass.	May 23, 1854. Patented in England March 30, 1854.
Horn, &c., machines for splitting	Emerson Prescott	Leominster, Mass.	Oct. 10, 1854.
Landing net, for anglers	Charles De Saxe, assignor to Thomas H. Bate.	New York, N. Y.	April 18, 1854.
Mail bag labels	Solomon Andrews	Perth Amboy, N. J.	July 25, 1854.
Matches, friction, machines for making	(See Class IV.)		
Matches, machine for matting the ends of blocks in making.	Henry E. Pierce	Claremont, Mass.	Jan. 10, 1854.
Rat traps	Hiram Stafford	Mount Pulaski, Logan county, Ill.	April 11, 1854.
Rat traps	Jose Toll	Locust Grove, Addams county, Ohio.	April 11, 1854.
Ratan machine	Sylvanus Sawyer	Fitchburg, Mass.	Dec. 12, 1854.
Ratan, machine for splitting	Joseph Sawyer	South Royalton, Worcester county, Mass.	Mar. 7, 1854.
Ratans, machines for splitting	Addison M. Sawyer	Templeton, Worcester county, Mass.	Mar. 7, 1854.
Sealing cans, apparatus for	Joel Green	Cincinnati, Ohio	July 11, 1854.
Sealing, hermetical	James Spratt	Cincinnati, Ohio.	July 18, 1854.
Sewing birds	Julius E. Merriman	Meriden, Conn	Feb. 7, 1854.
Sewing pin	Thaddeus Fowler	Waterbury, Conn.	Oct. 10, 1854.
Slate frame	Edmund Morris	Burlington, N. J	Nov. 7, 1854.
Staples to walls, mode of securing	J. L. Mott	Mott Haven, Westchester county, N. Y.	July 25, 1854.
Streets, machine for cleaning and watering	Ross Deegan	New York, N. Y.	June 6, 1854.
Tobacco, cutting	Ebenezer Murdock	Albany, N. Y	July 18, 1854.
Tobacco, machine for drying	Tyler W. Lafetra	New York, N. Y.	April 4, 1854.
Tops, whistling	W. E. Woodbridge, assignor to Charles Humphry.	Perth Amboy, N. J.	June 27, 1854.
Trap for animals	Oliver Pier	Harmony, Chautauque county, N. York.	June 27, 1854.
Trap for animals	Robert S. Craig	Cincinnati, Ohio.	Nov. 7, 1854.
Vermin, method of destroying	G. W. French and William Wagstaff	Cambridge, Mass.	Dec. 12, 1854.
Water-closet	Frederick H. Bartholomew	New York, N. Y.	Feb. 14, 1854.
Water-closet	Daniel Ryan and Jno. Flanagan	New York, N. Y.	Mar. 7, 1854.
Whips, knife die for cutting leather straps for	Charles Baeder	New York, N. Y.	Oct. 3, 1854.

Classified list of patents issued—Continued.

EXTENSIONS FOR 1854.

Inventions or discoveries.	Patentees.	Residence.	Date of extension.	Date of patent.
Books, trimming, machine for cutting paper and.....	Frederick J. Austin	New York, N. Y.....	Dec. 7, 1854	June 16, 1841; antedated Dec. 16, 1840; reis'd June 22, 1852.
Caldron, combined, and furnace for the use of agriculturists and others, mode of constructing a.	Jordan L. Mott.....	Mott Haven, N. Y.....	Nov. 20, 1854	Dec. 1, 1840.
Clocks, improvements in the method of constructing....	Aaron D. Crane.....	Newark, N. J.....	Dec. 15, 1854	Feb. 10, 1841; antedated Dec. 22, 1840.
Cloth, machine for reducing worn-out cloths and silks of various kinds to the fibrous state, so as to be capable of being manufactured into.	Reuben Daniels.....	Woodstock, Vt.....	Sep. 29, 1854	Oct. 10, 1840.
Cloth of wool, hair, or other suitable substance, machine for forming a web of, without spinning or weaving. (Extended by special act of Congress for fourteen years from and after March 28, 1854.)	John Arnold and Geo. G. Bishop.	Norwalk, Conn.....	Mar. 28, 1854	Oct. 20, 1836.
Cloth of wool, hair, or other suitable substance, machine for forming a web of, without spinning or weaving. (Extended by special act of Congress for fourteen years from and after March 28, 1854.)	John Arnold.....	Norwalk, Conn.	Mar. 28, 1854	July 15, 1829.
Corks, machine for cutting.....	William Dalrymple, executor of Sam'l Sawyer, deceased.	Boston, Mass.....	June 9, 1854	June 10, 1840.
Corn, machines for husking and shelling.....	Samuel S. Allen.....	Salem, N. J.....	Jan. 14, 1854	Jan. 15, 1840.
Cotton gin.....	Fones McCarthy	New Orange Spring, Fla....	June 28, 1854	July 3, 1840; re-issued April 18, 1854.
Cotton-ginning, machine for, and for cleaning wool from burs and other foreign matter.	Milton D. Whipple.....	Somerville, Mass.....	Oct. 24, 1854	Oct. 28, 1840.
Crushing hard substances, machine for.....	James Rowe.....	Tampa Bay, Fla.....	Mar. 28, 1854	April 24, 1840.
Electro-magnetism, mode of communicating information by application of.	S. F. B. Morse.....	Poughkeepsie, N. Y.....	June 19, 1854	June 20, 1840; re-issued Jan. 15, 1846; reis'd June 13, 1848.

Engines, steam, mode of regulating the waste steam in locomotive.	Ross Winans	Baltimore, Md	Nov. 20, 1854	Nov. 26, 1840.
Lathes, chuck for, expanding and contracting or universal	Simon Fairman	West Stafford, Conn	July 17, 1854	July 18, 1840.
Life-preserver	Ralph Bulkley	New York, N. Y	May 6, 1854	May 8, 1840.
Maps, mode of coloring	Lucius Stebbens	Hartford, Conn	Feb. 15, 1854	Mar. 12, 1840.
Mill for breaking and grinding bark	R. Montgomery and L. W. Harris	Sangerfield, N. Y	Aug. 10, 1854	Aug. 12, 1840.
Padlocks for mail-bags and other uses, called the clam-shell padlock, manner of constructing.	Solomon Andrews	Perth Amboy, N. J	Nov. 15, 1854	Dec. 5, 1840.
Paper, machine for boiling and washing rags for manufacturing.	Chas. Spafford, administrator of George Spafford, deceased.	Windham, Conn	Aug. 25, 1854	Sept. 2, 1840; re-issued June 11, 1850.
Puddle-balls or other masses of iron in the manufacture of iron, machine for rolling.	Henry Burden	Troy, N. Y	Dec. 9, 1854	Dec. 10, 1840.
Shuttles for weaving cloth	James Baldwin	Nashua, N. H	Jan. 14, 1854	Jan. 31, 1840.
Spark-arresters	David Matthew	Philadelphia, Pa	Dec. 27, 1854	Dec. 31, 1840.

DISCLAIMERS ENTERED DURING THE YEAR 1854.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.	Disclaimers entered.
Boilers for culinary purposes	James R. Stafford, assignor to Goodrich, Seavey & Co.	Cleveland, Ohio	June 12, 1847	July 13, 1854.
Electro-magnetism, mode of communicating information by signals by application of.	S. F. B. Morse, assignor to A. Vail	Poughkeepsie, N. Y.	June 20, 1840; re-issued Jan. 15, 1846; re-issued June 13, 1848.	June 19, 1854.
Electro-magnetism, mode of communicating information by signals by application of.	S. F. B. Morse, assignor to trustees of the New York, Albany, & Buffalo Magnetic Telegraph Company.	Poughkeepsie, N. Y.	June 20, 1840; re-issued Jan. 15, 1846; re-issued June 13, 1848.	June 20, 1854.
Looms, power	William Crompton, assignor to M. A. Furbush & George Crompton.	Worcester, Mass	Nov. 25, 1837; extended & re-issued Sept. 13, 1853.	Feb. 1, 1854.
Sewing-machines	T. C. Thompson	Ithaca, N. Y	Mar. 29, 1853	Feb. 16, 1854.
Sewing-machine	Grover, Baker & Co	Boston, Mass	June 22, 1852	Dec. 29, 1854.
Signals, electro-magnetism	S. F. B. Morse, assignor to the New York & New England Union Telegraph Company.	New York, N. Y	June 20, 1840; re-issued Jan. 15, 1846; re-issued June 13, 1848.	Mar. 17, 1854.
Starch, manufacture of	Samuel Blatchford, administrator of Orlando Jones.	New York, N. Y	Mar. 12, 1841; pat'd in England April 30, 1840.	April 6, 1854.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.	Disclaimers entered.
Telegraph, electro-magnetic	S. F. B. Morse, assignor to Maine Telegraph Company	New York, N. Y. / Portland, Me	June 20, 1840; re-issued Jan. 15, 1846; re-issued June 13, 1848.	April 20, 1854.
Telegraph, magnetic	Samuel F. B. Morse	Poughkeepsie, N. Y.	June 20, 1840; re-issued Jan. 15, 1846: re-issued June 13, 1848.	May 23, 1854.
Telegraph, magnetic	Samuel F. B. Morse, assignor to Magnetic Telegraph Company.	New York, N. Y.	June 20, 1840; re-issued Jan. 15, 1846; re-issued June 13, 1848.	June 14, 1854.

ADDITIONAL IMPROVEMENTS GRANTED DURING THE YEAR 1854.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.	Improvements added.
Bog-cutters	Edmund L. Freeman	Belleville, N. Y	June 21, 1853	Jan. 3, 1854.
Gates, apparatus for opening and closing	Samuel G. Dugdale	Richmond, Ind	Oct. 11, 1853; re-issued Jan. 31, 1854.	Mar. 7, 1854.
Harness saddle-tree	Thomas Mardock & William C. Kellar	Cincinnati, Ohio	Oct. 12, 1852	Aug. 1, 1854.
Looms	Samuel & James Eccles	Philadelphia, Penn	Aug. 3, 1852	July 18, 1854.
Mills, grinding	Oldin Nichols	Lowell, Mass	Oct. 12, 1852	May 30, 1854.
Musical instruments, reed, the construction of.	F. A. Gleason	Rome, N. Y.	June 20, 1854	Nov. 14, 1854.
Ploughs	David Swartz	Tom's Brook, Shenandoah county, Va.	June 22, 1852	Feb. 28, 1854.
Smut-machines	Jacob Benner	Liberty, Tioga county, Penn	Sept. 11, 1847	Feb. 14, 1854.
Washers, safety, for securing wheels to axles.	William Thornley	Philadelphia, Penn	Sept. 19, 1854	Oct. 31, 1854.
Whiffle-tree hooks	Martin Newman, 2d / N. C. Whitcomb / G. C. Cole	Lanesborough, Penn / Lanesborough, Penn / Hartford, Conn	Feb. 21, 1854	Oct 31, 1854.
Whips, raw-hide, machine for polishing	Charles Baeder	New York, N. Y.	May 21, 1850	Oct. 17, 1854.

REISSUES DURING THE YEAR 1854.

Inventions or discoveries.	Patentees.	Residence.	Date of reissue.	Date of patent.
Boots and shoes, machines for pegging	John J. Greenough	New York, N. Y.	July 4, 1854	Jan. 17, 1854.
Boots, cutting	Daniel Lynahon	Buffalo, N. Y	May 9, 1854	Oct. 18, 1853.
Cut, nail, from muntz metal	Samuel L. Crocker	Taunton, Mass	Aug. 1, 1854	April 17, 1849.
Caloriferes	Samuel Whitmarsh	Northampton, Mass.	Oct. 10, 1854	Aug. 17, 1852.
Fire-arms	Horace Smith and Daniel B. Wesson	Norwich, Conn.	Oct. 10, 1854	Feb. 14, 1854.
Gates, opening and closing, apparatus for	Samuel G. Dugdale	Richmond, Ind.	Jan. 31, 1854	Oct. 11, 1853.
Gin, cotton	Fones McCarthy	Putman county, Fla	April 18, 1854	July 3, 1840.
Gold-amalgamator	William Ball	Chicopee, Mass	Aug. 8, 1854	Sept. 9, 1851.
Grain-dryers	Henry G. Bulkley	Kalamazoo, Mich.	June 27, 1854	Mar. 2, 1852.
Havesters	Nelson Platt, assignor to W. H. Seymour and D. S. Morgan	Ottawa, Ill. Brockport, N. Y.	May 23, 1854	June 12, 1849.
Harvesters, grass	William F. Ketchum	Buffalo, N. Y.	Feb. 28, 1854	Feb. 10, 1852.
Horse-powers, portable	John A. Taplin	Fishkill, N. Y.	Jan. 24, 1854	Dec. 30, 1841.
Lock, bank	A. C. Harig and D. C. Stoy	Louisville, Ky.	Aug. 22, 1854	July 25, 1854.
Locks, gun	James Hults	Alum Creek, Delaware county, Ohio.	July 4, 1854	May 16, 1854.
Looms, for weaving figured fabrics	Cornelius W. Blanchard	Holyoke, Mass.	Jan. 3, 1854	Aug. 3, 1852.
Mills, for grinding	Elisha S. Snyder	Charlestown, Va	June 20, 1854	Feb. 10, 1846.
Pavements, sub-strata for	Horace P. Russ	New York, N. Y.	Mar. 28, 1854	Mar. 14, 1848.
Planter, seed	Charles Randall	Palmyra, Ga.	July 25, 1854	Nov. 2, 1852.
Planters, seed	M. and S. Pennock	Kennett's Square, Chester county, Pa.	Dec. 9, 1854	Mar. 12, 1841; reissued Oct. 30, 1849.
Pumps, for elevating water mixed with mineral substances.	Wm. Ball	Chicopee, Mass.	Sept. 12, 1854	Dec. 23, 1851.
Rake to harvesting-machines	Sylvanus Miller	Urbana, Ohio	Nov. 21, 1854	July 15, 1851.
Rakes to grain-harvesters	Jearum Atkins	Chicago, Ill.	Oct. 31, 1854	Dec. 21, 1852.
Roving, variegated process of manufacturing	Jonas Holmes and Ephraim French	Lee, Berkshire county, Mass.	Feb. 28, 1854	May 18, 1852.
Safes, fire and burglar-proof	F. C. Goffin, assignor to A. B. Ely	New York, N. Y.	April 25, 1854	Feb. 14, 1854.
Sewing-machines	Charles Morey and Joseph B. Johnson, assignors to J. M. Singer and Edward Clark.	New York, N. Y.	June 27, 1854	Feb. 6, 1849.

Classified list of patents issued—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of reissue.	Date of patent.
Sewing-machines	Charles R. Fox	Chicago, Ill	July 18, 1854	May 9, 1854.
Sewing-machines	Isaac M. Singer	New York, N. Y.	Oct. 3, 1854	Aug. 12, 1851.
Shingle-machine	Enoch R. Morrison	Troy, Pa	Mar. 7, 1854	Nov. 22, 1853.
Slags of furnaces, utilizing	William H. Smith	Philadelphia, Pa	Jan. 3, 1854	Dec. 7, 1852.
Smut-machines	Jehu Hollingsworth	Zanesville, Ohio	Oct. 10, 1854	April 22, 1851.
Stuffing-boxes	Thos. W. Allen and Charles W. Noyes	Greenbush, N. Y.	Jan. 10, 1854	Nov. 6, 1847.
Valves for governors	Junius and Alfred Judson, assignors to Junius Judson.	Rochester, N. Y.	Jan. 10, 1854	Nov. 5, 1850.
Wheels, flutter, method of applying water to compound buckets of.	David Rankin	Augusta county, Va.	Sept. 26, 1854	July 11, 1854.
Winnowing-machines	Samuel Canby	Elicott's Mills, Md.	Nov. 14, 1854	Dec. 28, 1852.

DESIGNS.

Designs.	Patentees.	Residence.	Date of patent.
Brackets	Isaac De Zouche	Troy, N. Y.	Oct. 31, 1854.
Clock-case front	Charles Chinnock	New York, N. Y.	May 16, 1854.
Clock-case fronts	Charles Chinnock	New York, N. Y.	Oct. 17, 1854.
Clock-case fronts	Charles Chinnock	New York, N. Y.	Oct. 17, 1854.
Clock-case fronts	Charles Chinnock	New York, N. Y.	Oct. 17, 1854.
Clock-case fronts, for cast metal	Charles Chinnock	New York, N. Y.	May 23, 1854.
Clock-cases, for the fronts of	Nicholas Muller	New York, N. Y.	Aug. 29, 1854.
Clock-cases, for the fronts of cast metal	Charles Chinnock	New York, N. Y.	May 23, 1854.
Clock-cases, fronts of	William B. Lorton	New York, N. Y.	April 25, 1854.
Coffee-pot, design for tea or	William Hattersley and Charles Dickenson	Newark, N. J.	July 4, 1854.

Fences, wire	Mathias Lachennaier	Philadelphia, Pa	Nov. 21, 1854.
Foot-stool or ottoman, frame of a, No. 1	Charles Zenner, assignor to Greenwood & Co.	Cincinnati, Ohio	Jan. 3, 1854.
Do do No. 2	Charles Zenner, assignor to Greenwood & Co.	Cincinnati, Ohio	Jan. 3, 1854.
Franklin fire-places	Nathaniel S. Prince, assignor to Franklin, Muzzy & Co., and Allen Lambard.	Boston, Mass	Oct. 31, 1854; antedated Sept. 10, 1854.
Guitars	William B. Tilton	New York, N. Y	Feb. 21, 1854.
Hair-brushes, frames and handles of	Hugh Rock, assignor to H. Rock and F. McLaughlin.	Boston, Mass	May 2, 1854.
Oven-doors	J. F. Allen and J. Stewart, assignors to Cresson, Stewart & Peterson.	Philadelphia, Pa	May 23, 1854.
Piano-fortes, cast-iron legs of	Frederick Starr	Rochester, N. Y	Feb. 28, 1854.
Piano-fortes, cast-iron pedal lyre for	Frederick Starr	Rochester, N. Y	Feb. 28, 1854.
Ranges, cooking, portable	G. Smith, H. Brown, and J. H. Reed, assignors to Abbot & Lawrence.	Philadelphia, Pa	May 23, 1854.
Ranges, portable	J. F. Allen and J. Stewart, assignors to Cresson, Stuart & Peterson.	Philadelphia, Pa	May 23, 1854.
Ranges, summer, doors of, gas ovens, or	S. W. Gibbs, assignor to North, Chase & North.	Albany, N. Y. / Philadelphia, Pa	May 9, 1854.
Shovel-and-tongs stand	Chas. Zennor, assignor to M. Greenwood & Co.	Cincinnati, Ohio	Jan. 24, 1854.
Shovel-and-tongs stand	Chas. Zennor, assignor to M. Greenwood & Co.	Cincinnati, Ohio	Jan. 24, 1854.
Stove, cannon	Wm. Resor, assignee of Wm. & R. P. Resor & Co.	Cincinnati, Ohio	Jan. 31, 1854.
Stove, cooking	C. Harris and P. W. Zoiner	Cincinnati, Ohio	Jan. 24, 1854.
Stove, cooking	C. Harris and P. W. Zoiner, assignors to Alex. Bradley.	Pittsburg, Penn	Jan. 31, 1854.
Stove, cooking	Peter Seibert, assignor to Alex. Bradley	Pittsburg, Penn	Jan. 31, 1854.
Stove, cooking	W. P. Gray, assignor to Cox, Hager & Cox	Philadelphia, Penn	Oct. 17, 1854.
Stove, cooking	Harrison Eaton, assignor to Jas. Hartshorn and Winslow Ames.	Nashua, N. H	July 11, 1854; antedated June 20, 1854.
Stove, cooking	John C. Smith, assignor to Warnick & Leibrandt.	Philadelphia, Penn	July 11, 1854.
Stove, cooking, or summer range	John Abendroth	Port Chester, Westchester, N. Y.	May 2, 1854.
Stove, dining-room	C. Harris & P. W. Zoiner	Cincinnati, Ohio	Jan. 24, 1854.
Stove, hall	William Resor, assignor to Wm. & R. P. Resor & Co.	Cincinnati, Ohio	Jan. 3, 1854.
Stove, laundry	Wm. Resor	Cincinnati, Ohio	Jan. 17, 1854.
Stove, parlor	N. S. Vedder, assignor to A. T. Dunham & Co.	Troy, N. Y	Feb. 14, 1854.

Classified list of patents issued—Continued.

Designs.	Patentees.	Residence.	Date of patent.
Stove-plates	Jno. Burgess, assignor to Geer & Co	Troy, N. Y	April 25, 1854.
Stove, radiator	Sam'l H. Sailor and John C. Smith, assignors to Warnick & Leibrandt.	Philadelphia, Penn	July 11, 1854.
Stoves	Horace W. Robbins	Baltimore, Md	Nov. 28, 1854.
Stoves	Jno. F. Allen and Jos. Stewart, assignors to North, Chase & North.	Philadelphia, Penn	Mar. 21, 1854.
Stoves, air-tight	G. Smith and Henry Brown	Philadelphia, Penn	April 25, 1854.
Stoves, &c., panel ornament for	Isaac De Zouche, assignor to Louis Potter	Troy, N. Y New York, N. Y	Mar. 14, 1854.
Stoves, bar-room	W. P. Cresson & Co., assignees of Jacob Beesley.	Philadelphia, Penn	Nov. 7, 1854; antedated May 7, 1854.
Stoves, box	Jos. Stewart, assignor to Cresson, Stuart & Peterson.	Baltimore, Md	Dec. 5, 1854.
Stoves, coal	C. Harris and P. W. Zoiner	Cincinnati, Ohio	Feb. 21, 1854.
Stoves, coal	Samuel D. Vose	Albany, N. Y	Mar. 28, 1854.
Stoves, cooking (1)	Samuel D. Vose	Albany, N. Y	Feb. 14, 1854; antedated Dec. 30, 1853.
Stoves, cooking (2)	Samuel D. Vose	Albany, N. Y	Feb. 14, 1854; antedated Dec. 30, 1853.
Stoves, cooking (3)	Samuel D. Vose	Albany, N. Y	Feb. 14, 1854; antedated Dec. 30, 1853.
Stoves, parlor (4)	Samuel D. Vose	Albany, N. Y	Feb. 14, 1854; antedated Dec. 30, 1853.
Stoves, cooking	Samuel D. Vose	Albany, N. Y	Mar. 28, 1854.
Stoves, cooking	Wm. T. Coggeshall	Fall River, Mass	April 18, 1854.
Stoves, cooking	N. P. Richardson	Portland, Cumberland county, Me.	May 2, 1854.
Stoves, cooking	Jacob Beesley and E. J. Delany, assignors to Cresson, Stuart & Peterson.	Philadelphia, Penn	May 23, 1854.
Stoves, cooking	Apollos Richmond, assignor to A. C. Barstow & Co.	Providence, R. I	June 13, 1854.
Stoves, cooking	William M. Snow	Providence, R. I	Aug. 8, 1854.
Stoves, cooking	Francis Heller and Elias Young	Cincinnati, Ohio	Aug. 15, 1854

Stoves, cooking	S. H. Sailor, assignor to J. G. Abbott and A. Lawrence.	Philadelphia, Pa	Aug. 8, 1854.
Stoves, cooking	Amos Paul	New Market, Rockingham county, N. H.	Aug. 29, 1854.
Stoves, cooking	Nathaniel P. Richardson	Portland, Me	Dec. 12, 1854.
Stoves, cooking, door and panel of	M. C. Burleigh	Great Falls, Strafford county, N. H.	April 25, 1854.
Stoves, "egg stove"	W. P. Cresson & Co., assignees of David Stuart.	Philadelphia, Pa	Nov. 7, 1854; antedated May 7, 1854.
Stoves, Franklin	William Resor	Cincinnati, Ohio	Oct. 3, 1854.
Stoves, Franklin	William Resor	Cincinnati, Ohio	Oct. 17, 1854.
Stoves, Franklin	J. F. Allen and Joseph Stewart, assignors to J. G. Abbott and A. Lawrence.	Philadelphia, Pa	Aug. 8, 1854.
Stoves, parlor	Jacob Beesley and E. J. Delaney, assignors to Cresson, Stuart, and Peterson.	Philadelphia, Pa	May 23, 1854.
Traps, mole	Henry Fry, assignor to Samuel Maxwell	Cincinnati, Ohio	Sept. 12, 1854.
Well-curbs	William Benjamin Douglass	Middletown, Conn	July 11, 1854.

ALPHABETICAL LIST OF PATENTEES FOR THE YEAR 1854.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11592	Abbe, Robert M.	Hog-pens	Aug. 29, 1854.	I.
	Abbott & Lawrence, assignees. (See Allen & Stewart, assignors.)			
	Abbott & Lawrence, assignees. (See S. H. Sailor, assignor.)			
	Abbott & Lawrence. (See Smith *et al.*, assignors)			
644	Abendroth, John	Stove, cooking, or summer range	May 2, 1854	Design.
11057	Abos, Casimir	Spark-arresters	June 13, 1854	V.
11958	Absterdam, John	Cylinders of steam-engines, arrangement of means for lubricating the.	Nov. 21, 1854	VI.
10573	Absterdam, John, and William Burnett	Boilers, steam, use of fusible disks in	Feb. 28, 1854	VI.
10703	Absterdam, John, and William B. Merrill, assignors to J. A. Woodbury and William B. Merrill.	Tonguing and grooving tapering boards, device for	Mar. 28, 1854	XIV.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11986	Adams, Alden	Presses, hay and cotton	Nov. 28, 1854	XII.
10438	Adams, Calvin	Press, copying	Jan. 24, 1854	XVIII.
11685	Adams, Henry W	Fire-arms, breech-loading	Sept. 19, 1854	XIX.
10851	Adams, John W	Cotton	May, 2, 1854	III.
10952	Adams, Ransom P	Fence-posts, excavator for	May 23, 1854	IX.
11405	Adler, Elkan	Matches, machinery for making	Aug. 1, 1854	IV.
11636	Ager, Wilson	Mill-stone dress for cleaning grain	Sept. 5, 1854	XIII.
11637	Akins, William H	Flour-bolt	Sept. 5, 1854	XIII.
11711	Akins, William H., and J. C. Burritt, assignors to W. H. Akins.	Clocks, calendar	Sept. 19, 1854	VIII.
10728	Akins, William H., assignor to Samuel J. Parker	Sewing-machines, cops for	April 4, 1854	III.
11563	Alburger, Charles M	Hydrant, hose, and hitching post, pavement washer	Aug. 22, 1854	XI.
11738	Aldrick, Arad, assignor to John L. Cooper and Arad Aldrick.	Forms, irregular, machines for cutting	Sept. 26, 1854	XIV.
664	Allan, J. F., and Jos. Stewart, assignors to J. G. Abbo't and A. Lawrence.	Stoves, Franklin	Aug. 8, 1854	Design.
654	Allan, J. F., and Jos. Stewart, assignors to Cresson, Stuart, and Peterson.	Ranges, portable	May 23, 1854	Design.
655	Allan, J. F., and Jos. Stewart, assignors to Cresson, Stuart, and Peterson.	Oven-doors	May 23, 1854	Design.
636	Allan, J. F., and Jos. Stewart, assignors to North, Chase, and North.	Stoves	Mar. 21, 1854	Design.
12017	Allen, Aaron H	Seats for public buildings	Dec. 5, 1854	IX.
11922	Allen, Edwin	Stone, carving, machinery for	Nov. 14, 1854	XV.
11107	Allen, Edwin	Veneer-polisher	June 20, 1854	XIV.
11006	Allen, Henry	Polygonal timber, machine for dressing	June 6, 1854	XIV.
10768	Allen, Henry	Boring and mortising machine	April 11, 1854	XIV.
	Allen, Samuel S	Corn, machines for husking and shelling	Jan. 15, 1840; extended January 14, 1854.	Extension.
	Allen, Stillman, & Co., assignees. (See Bullock, Smith W., assignor.)			

254	Allen, Thomas W., and Charles W. Noyes	Stuffing-boxes	Nov. 6, 1847; re-issued January 10, 1854.	Re-issue.
10853	Allender, John	Tool-holders, operating catches in	May 2, 1854	II.
11108	Allender, John	Grommets, metallic	June 20, 1854	VII.
11959	Alvord, Clark	Brick-moulds, hand	Nov. 21, 1854	XV.
11110	Ambler, D. C.	Boilers, setting of steam	June 20, 1854	VI.
11109	Ambler, D. C.	Quartz-crushers	June 20, 1854	II.
11884	Ambler, Daniel C.	Sewing-machines	Nov. 7, 1854	III.
10530	Ambler, George B.	Saddle-trees	Feb. 14, 1854	XVI.
10675	Ament, C. V.	Eggs, hens', in the nest, devices for preserving	Mar. 21, 1854	I.
12048	Ames, Nathan	Polygraph	Dec. 12, 1854	XVIII.
12049	Ames, Nathan	Polygraphs	Dec. 12, 1854	XVIII.
	Ames & Hartshorn, assignees. (See Eaton, Harrison, assignor.)			
11150	Amory, Jonathan, and William F. Parrott	Boilers, in the furnace of steam	June 27, 1854	VI.
11452	Anderson, William	Harrow	Aug. 1, 1854	I.
10538	Andrews, Frederick T.	Saws, method of operating	Feb. 21, 1854	XIV.
12084	Andrews, John, assignor to J. Andrews, N. A. Richardson, and Gardner Symmes.	Planters, seed	Dec. 12, 1854	I.
10439	Andrews, R. & A. F.	Saws, wood	Jan. 24, 1854	XIV.
10616	Andrews, Robert W.	Britannia tea and coffee pots	Mar. 7, 1854	XVII.
10720	Andrews, Solomon	Forging and punching-machines, drop and die	April 4, 1854	II.
11348	Andrews, Solomon	Mail-bag labels	July 25, 1854	XXII.
	Andrews, Solomon	Padlocks for mail-bags and other uses, called the clam-shell padlock, manner of constructing.	Dec. 5, 1840; extended Nov. 15, 1854.	Extension.
11544	Andrews, William D.	Pump, centrifugal	Aug. 22, 1854	XI.
10465	Anthony, Henry T.	Presses for making miniature-cases	Jan. 31, 1854	XVIII.
10953	Anthony, Henry T. and Frank Phœbus.	Daguerreotype cases, &c., apparatus for the manufacture of.	May 23, 1854	XVIII.
10664	Appleton, Charles F.	Dyeing, processes for	Mar. 21, 1854	IV.
10677	Appleton, Charles F.	Dyeing apparatus	Mar. 21, 1854; in England Jan. 7, 1854.	IV.
10978	Appleton, Charles F.	Dyeing processes	May 30, 1854	IV.
10797	Armitage, Thomas	Fire-escape, portable ladder or	April 18, 1854	XXII.
10769	Arnold, Francis	Lanterns, combining foot-stoves, &c	April 11, 1854	V.
	Arnold, John	Cloth, of wool, hair, or other suitable substance, machine for forming a web of, without spinning or weaving	July 15, 1829; extended March 28, 1854.	Extension.

Alphabetical List of Patentees—Continued.

No.	Name of parentee.	Invention or discovery.	Date.	Class.
	Arnold, John, and George J. Bishop	Cloth, of wool, hair, or other suitable substance, machine for forming a web of, without spinning or weaving.	Oct. 20, 1836; extended March 28, 1854.	Extension.
10852	Arnold, William E.	Horse-powers, endless chain, couplings in	May 2, 1854	XIII.
11513	Arthur, Robert	Bottles, &c., closing the mouths of, air-tight	Aug. 15, 1854	XXII.
10490	Asay, A. M.	Chairs, dental	Feb. 7, 1854	XX.
10715	Ashcroft, Edward H.	Track-cleaners for railroads	Mar. 28, 1854	X.
11055	Ashcroft, Thomas	Valves, cut-off, for steam-engines, operating	June 13, 1854	VI.
	Asphalte Mining and Kerosene Gas Company. (See Gesner, assignor, A. B. C.)			
11851	Atherton, Nathan	Engines, steam	Oct. 31, 1854	VI.
282	Atkins, Jearum	Rakes for grain-harvesters	Dec 12, 1852; reissued Oct. 31, 1854.	Reissue.
11714	Aubin, N.	Gas-generators	Sept. 26, 1854	IV.
	Augustus, John J., D. F. Mellen, and Samuel A. Eaton. (See Mellen, Dustin F., *et al.*)			
10787	Aulick, George	Car-couplings	April 18, 1854	X.
	Austin, Frederick J.	Books, trimming, machine for cutting paper and	June 16, 1841; antedated Dec. 16, 1840—reissued June 22, 1852—extended Dec. 7, 1854.	Extension.
	Austin, Smith & Ruggles, assignees. (See S. W. Ruggles, assignor.)			
10819	Avery, John P.	Foundations, mode of securing stones in	April 25, 1854	IX.
11921	Avery, John P., assignor to Joseph B. Bromley	Stone-dressing machine	Nov. 7, 1854	XV.
10880	Avery, Otis	Sewing machines	May 9, 1854	III.
10954	Babbitt, Isaac	Hones	May 23, 1854; in England March 30, 1854.	XXII.
11853	Babcock, A. M. and G. H.	Press for printing in colors	Oct. 31, 1854	XVIII.
11466	Babcock, William S.	Wagons, dumping	Aug. 8, 1854	X.
11987	Bachstein, Gottleib	Engines, fire, arrangement of device for applying power to.	Nov. 28, 1854	XI.

10502	Bachelor, S. B.	Scythe fastenings	Feb. 28, 1854	I.
	Backmeister & Wallace. (See Wallace & E. Backmeister, administratrix.)			
11636	Badger, Elliot C.	Mill-stones, machines for dressing	Sept. 19, 1854	XIII.
114	Baeder, Charles	Whips, raw hide, machines for polishing	May 21, 1850; additional improvement Oct. 17, 1854.	Add'l imp't.
11854	Baeder, Charles	Whips, knife-die for cutting leather straps for	Oct. 31, 1854	XXII.
10441	Bailey, Charles P.	Cars, dumping	Jan. 24, 1854	X.
10698	Bailey, C. P.	Chairs, portable, head-rest for	Mar. 28, 1854	XVII.
11772	Bailey, Charles P.	Car seats, railroad	Oct. 10, 1854	X.
12088	Bailey, Charles P.	Forms, apparatus to a machine for cutting irregular	Dec. 19, 1854	XIV.
	Bailey, John A. (See Speed, John J, jr.)			
11349	Bailey, Thomas R. and George	Tenons, round, device in machines for cutting	July 25, 1854	XIV.
11408	Baker, Collins B.	Brick presses	Aug. 1, 1854	XV.
10922	Baker, Frank	Lathe for irregular forms	May 16, 1854	XIV.
	Baker, Grover & Co. (See Grover, Baker & Co.)			
11821	Baker, Henry F.	Ploughs	Oct. 24, 1854	I.
11960	Baker, Henry F.	Papering walls	Nov. 21, 1854	XVIII.
10903	Baker, William.	Clap-board joint	May 16, 1854	XIV.
10699	Balding, Anson	Scoops, submarine	Mar. 28, 1854	IX.
10919	Baldwin, D. P.	Bath, shower	May 16, 1854	XVII.
11283	Baldwin, Eden A., (2d,) administrator of Eden Baldwin, deceased.	Fire-arms	July 11, 1854	XIX.
11467	Baldwin, Eden A.	Bridges, tubular	Aug. 8, 1854	IX.
10955	Baldwin, Hiram	Lever, ratchet	May 23, 1854	XII.
	Baldwin, James	Shuttles for weaving cloth	Jan. 31, 1840; extended Jan. 14, 1854.	Extension.
10514	Baldwin, M. W., and David Clark	Heaters, vertical tube feed-water, in locomotive smoke-stacks, arrangement of	Feb. 14, 1854	VI.
10731	Ball, Eastman R.	Bedstead fastenings	April 4, 1854	XVII.
11264	Ball, Jonathan	Water-pipes	July 11, 1854	XI.
11923	Ball, Levi B.	Smut-machines	Nov. 14, 1854	XIII.
11983	Ball, Thomas C., assignor to Nathaniel Lamson	Scythe fastening	Nov. 21, 1854	I.
274	Ball, William	Gold amalgamator	Sept. 9, 1851; reissued Aug. 8, 1854.	Reissue.
276	Ball, William	Pumps for elevating water mixed with mineral substances.	Dec. 23, 1851; reissued Sept. 12, 1854.	Reissue.
10754	Ball, William	Ores, &c., mills for grinding	April 11, 1854	II.
10799	Ballard, James	Gauges, slitting	April 18, 1854	XIV.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10854	Ballard, William	Ships' knees	May 2, 1854	VII.
11007	Ballard, William	Ship-frames, bent timbers for	June 6, 1854	VII.
10491	Bancroft, Edward, and Wm. Sellers	Turning-lathes	Feb. 7, 1854	XIV.
11924	Bancroft, William	Cultivators	Nov. 14, 1854	I.
10629	Bard, Edwin M	Ploughs, mould-boards of	Mar. 14, 1854	I.
11855	Barker, Joseph	Winnowers, grain	Oct. 31, 1854	I.
11114	Barlow, Thos H	Nail, cut, machines	June 20, 1854	II.
	Barnes, H., and H. Halvorson. (See Halvorson, H., assignor.)			
11804	Barnes, Joseph T	Looms, power	Oct. 17, 1854	III.
11805	Barnum, Daniel	Hat-bodies, machinery for forming	Oct. 17, 1854	III.
	Barr, J. W., *et al.* (See Stouffer, *et al.*)			
10489	Barrows, Ebenezer	Engines, rotary	Feb. 7, 1854; in England, July 3, 1851.	VI.
10980	Barsanter, John H	Knitting-machines	May 30, 1854	III.
	Barstow, A. C. & Co., assignees. (See Richmond, Apollos, assignor.)			
10418	Barth, John H	Bedsteads	Jan. 10, 1854	XVII.
10531	Bartholomew, Frederick H	Water-closets	Feb. 14, 1854	XXII.
11113	Bartholomew, Frederick H	Valve-cocks, governing the action of	June 20, 1854	XI.
	Bartlett, Benjamin F. (See Alonzo S. Woodward.)			
10631	Bartlett, Russell D	Shovel-handles, machines for making	Mar. 14, 1854	II.
11288	Bartlett, Russell D	Shovel-handles, machine for making the heads of	July 11, 1854	II.
11465	Bartlett, Russell D	Bricks, machines for making	Aug. 8, 1854	XV.
	Bartlett, S. S., and Jno. E. Brown. (See Brown & Bartlett.)			
10532	Barton, Jason	Bells, horse	Feb. 14, 1854	XXII.
10539	Barton, Jason	Bells, horse, mode of attaching to straps	Feb. 21, 1854	XXII.
10906	Bass, Wm. L	Tables for ships' cabins	May 16, 1854	VII.
10537	Bassett, Joel R., assignor to C. H. Williams	Pumps, valves for	Feb. 14, 1854	XI.
11115	Bassett, Mark S	Flour sifter and renovator	June 20, 1854	XIII.
11822	Bassett, Mark S	Sifting and bolting	Oct. 24, 1854	XIII.

11852	Bassford, Abraham	Piano fortes, key for tuning	Oct. 31, 1854	XVIII.
10496	Batchelder, John M., and M. G. Farmer	Telegraphic register, mode of making battery connexion with an electro-magnetic coil on the travelling carriage of a	Feb. 7, 1854	VIII.
11058	Batchelder, John M	Telegraphic wires, insulating	June 13, 1854	VIII.
11744	Batchelder, Thomas	Saws, wood, machines for manufacturing frames of	Oct. 3, 1854	XIV.
10440	Batcheller, Lucien B	Brakes, car, railroad	Jan. 24, 1854	X.
	Bate, Thomas H. (See De Saxe, assignor.)			
	Bate, Thomas H. (See De Saxe, assignor.)			
11925	Bates, Henry	Valves, slide, for the exhaust steam	Nov. 14, 1854	VI.
10425	Bates, Perry G	Hinge, spiral, or worm-joint	Jan. 17, 1854	II.
11407	Bauersfeld, Charles F	Bits for carving-machines	Aug. 1, 1854	II.
11151	Bauman, Jesse	Mills, cider	June 27, 1854	XIII.
10719	Baxendale, James, assignor to J. Baxendale and J. Ferguson.	Printing-cylinders, method of operating the doctors of	Mar. 28, 1854	XVIII.
11593	Bazemore, William T	Cultivators	Aug. 29, 1854	I.
11512	Bazin, James A., assignor to A. B. Ely	Braiding-machines	Aug. 8, 1854	III.
11585	Bazin, James A., assignor to A. B. Ely	Cog-gearing	Aug. 22, 1854	XIII.
10823	Bazin, Stephen, and James A	Rope, machinery for laying	April 25, 1854	III.
11543	Beach, Henry H	Winnowers	Aug. 15, 1854	I.
10956	Beach, John	Cheese hoops	May 23, 1854	I.
	Beach, N. E. (See Thomas J. W. Robertson.)			
10979	Beal, William	Crushers, corn	May 30, 1854	XIII.
11715	Beals, Fordyce	Fire-arms	Sept. 26, 1854	XIX.
11152	Beatty, Charles H	Coffee-mills	June 27, 1854	XVII.
10656	Beaumont, Victor	Types, machine for distributing	Mar. 21, 1854	XVIII.
11743	Beaumont, Victor	Gauge, steam	Oct. 3, 1854	VI.
11823	Bedwell, John D	Smut-machines	Oct. 24, 1854	XIII.
11926	Beebe, William	Hot water apparatus, double cylinder boilers for	Nov. 14, 1854	V.
11433	Bee, Benjamin F	Boilers, steam, feed-water apparatus to	Aug. 1, 1854	VI.
11016	Beers, Smith	Turning hubs, &c., method of	June 6, 1854	XIV.
652	Beesley, Jacob, and E. J. Delaney, assignors to Cresson, Stuart, & Peterson.	Stoves, cooking	May 23, 1854	Design.
653	Beesley, Jacob, and E. J. Delaney, assignors to Cresson, Stuart, & Peterson.	Stoves, parlor	May 23, 1854	Design.
677	Beesley, Jacob, assignor to W. P. Cresson & Co	Stoves, bar-room	Nov. 7, 1854; antedated May 7, 1854.	Design.
11927	Bell, Martin, and E. B. Isett	Furnaces for making iron direct from the ore	Nov. 14, 1854	II.
10581	Bell, Solyman	Harvesters	Feb. 28, 1854	I.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11928	Bell, William	Lamp-caps	Nov. 14, 1854	V.
10466	Benedict, Philander H.	Daguerreotype plate-holder	Jan. 31, 1854	XVIII.
108	Benner, Jacob	Smut-machines	Sept. 11, 1847; additional improvem't, Feb. 14, 1854.	Add'l imp't.
10662	Benton, R. P	Spokes, machine for dressing	Mar. 21, 1854	XIV.
10630	Berry, James	Printing-blocks, method of constructing moulds for making.	Mar. 14, 1854	XVIII.
11101	Bevan, John	Ventilator, railroad car	June 13, 1854	V.
11594	Biddle, William	Washing-machines	Aug. 29, 1854	XVII.
11803	Bigelow, E. B.	Loom for weaving cut-pile fabrics	Oct. 17, 1854; in England, December 31, 1851.	III.
10981	Bigelow, Charles H	Wheels, turbine, mode of manufacturing	May 30, 1854	XI.
11350	Bill, H. N. and J. C	Axes, &c., method of securing helves in	July 25, 1854	XIV.
10632	Billings, Charles W	Planters, seed	Mar. 14, 1854	I.
	Bird, H. M., *et al.* (See D. Wilson, assignor)			
11316	Bird, Will E	Boiler, steam	July 18, 1854	VI.
	Bishop, George G., and John Arnold. (See Arnold & Bishop)			
11458	Black, Horatio M.	Grain, machine for cleaning and drying	Aug. 1, 1854	XIII.
11687	Black, William	Engines, steam	Sept. 19, 1854	VI.
10648	Blake, Mansell, assignor to M. Blake, J. B McAlester, and E. Blake.	Blinds, folding	Mar. 14, 1854	IX.
10798	Blake, Philos	Oyster-knife	April 18, 1854	XVII.
253	Blanchard, Cornelius W.	Looms for weaving figured fabrics	Aug. 3, 1852; reissued January 3, 1854.	Reissue.
10497	Blanchard, Thomas	Plough handles and other articles, machines for polishing.	Feb. 7, 1854	I.
	Blatchford, Samuel, administrator. (See Orlando Jones.)			
10540	Bliss, J. W	Pulleys, window-cord	Feb. 21, 1854	XII.
10663	Bliss, Jeremy W	Jacks, lifting	Mar. 21, 1854	XII.
12018	Blodgett, G. S., and P. T. Sweet	Ovens, for baking	Dec. 5, 1854	V.

10366	Blodget, Sherburn C	Umbrella covers, hemming and cording	Jan. 3, 1854; antedated July 3, 1853.	XXI.
11111	Blondin, Gabriel	Paints, process for treating	June 20, 1854	IV.
11112	Blondin, Gabriel	Paint, composition	June 20, 1854	IV.
11353	Boekten, R., and H. T. Brown	Bottles	July 25, 1854	XXII.
10793	Boggett, Wm., and G. B. Pettit	Gas, heating, warming, and cooking by	April 18, 1854; in England Oct. 22, 1851.	V.
∞11116	Bone, Joseph	Winnowers, grain	June 20, 1854	I.
12050	Bonelli, Gaetan	Looms, operating, by electricity	Dec. 12, 1854; in France Aug 15, 1853.	III.
11468	Bonney, William	Process of imitating marble and other substances	Aug. 8, 1854	IV.
10732	Booth, Solomon G	Metal, sheet, machines for corrugating	April 4, 1854	II.
	Booth, W. M., and Chas. Monnin. (See Monnin & Booth.)			
	Bosworth, G. W., *et al.* (See D. Wilson, assignor.)			
10467	Boughton, Enos	Cultivators	Jan. 31, 1854	I.
10880	Bouton, R. M	Faucet	April 18, 1854	XI.
11824	Bowen, Archibald	Separator, straw and grain	Oct. 24, 1854	I.
	Bouker, Jno. P., jr. (See Daniel Harris, assignor.)			
11825	Boyack, Robert	Hemp and flax, machinery for softening	Oct. 24, 1854	III.
10468	Boyd, William	Monuments, mode of fixing likenesses in	Jan. 31, 1854	XVIII.
	Boyden, Joshua, and W. F. Collier. (See W. F. Collier, assignor.)			
11318	Boynton, Leander W	Flocks for felting, machines for preparing	July 18, 1854	III.
11659	Boynton, Leander W	Wool, machines for cleaning	Sept. 12, 1854	III.
11773	Boynton, Leander W	Hat bodies, machinery for making	Oct. 10, 1854	III.
11469	Boynton, Nathaniel A	Stoves, air-heating	Aug. 8, 1854	V.
11545	Boynton, Nathaniel A	Furnace, hot-air	Aug. 22, 1854	V.
12014	Boynton, Osgood G., assignor to Nehemiah Hunt.			
	Bradley, Alexander. (See Harris & Zoiner.)			
	Bradley, Alexander. (See Peter Seibert.)			
11531	Bradley, William	Graters, nutmeg	July 25, 1854	XVII.
11514	Bradshaw, John A	Boots and shoes, machines for pegging	Aug. 15, 1854	XVI.
11774	Bradshaw, John A	Shingle-machine	Oct. 10, 1854	XIV.
	Bradway, A., and E. Valentine. (See Valentine & Bradway.)			
11018	Brady, Alfred	Vault-covers	June 6, 1854	IX.
11638	Bray, Benjamin	Curtains, &c., window, spring-rollers for	Sept. 5, 1854	XVII.
10983	Breaer, Abel	Wheels, car, fastening the disk and rims of	May 30, 1854	X.

Alphabetical List of Patentees—Continued.

No	Name of patentee.	Invention or discovery.	Date.	Class.
	Breaer, Abel, and G. B. Simonds. (See Simonds & Breaer.)			
11885	Brennan, John B	Locks	Nov. 7, 1854	II.
10419	Brewer, Harvey	Lamps, torch	Jan. 10, 1854	V.
11248	Brewer, John W	Balloons, mooring and managing, arrangement for	July 1, 1854	XI.
11547	Bridendolph, Benjamin	Mills, hominy	Aug. 22, 1854	XIII.
11660	Bridgham, H. C., and James H. Stewart	Books, apparatus for turning the leaves of	Sept. 12, 1854	XVIII.
	Brierly, Thomas, and James H. Jennings. (See James H. Jennings.)			
	Briggs, Joseph, and John Carton. (See Carton & Briggs.)			
11717	Briggs, Schuyler, and John G. Talbot	Yoke, neck	Sept. 26, 1854	I.
	Bright, James, assignee. (See A. P. Morley.)			
11409	Bristol, Richard C	Boiler tubes, steam	Aug. 1, 1854	VI.
11546	Bristol, Richard C	Engines, rotary	Aug. 22, 1854	VI.
10587	Brodhead, James F., assignor to Thomas Ritch	Saw-sets, forcep	Feb. 28, 1854	XIV.
	Bromley, Joseph B., assignee of John P. Avery.			
11515	Brooke, William	Glass moulds	Aug. 15, 1854	XV.
11596	Brooks, Lebbeus	Levels, spirit	Aug. 29, 1854	VIII.
10770	Brooks, Stephen P	Piano-forte, iron frame, upright	April 11, 1854	XVIII.
	Brough, Peter, *et al.* (See Stouffer, *et al.*)			
11886	Broughton, Albert	Stone, machinery for polishing	Nov. 7, 1854; antedated October 24, 1854.	XV.
11302	Brown, Adolphe & Felix	Hat-shapers	July 4, 1854	XVII.
11658	Brown, Alexander H	Brick presses	Sept. 5, 1854	XV.
12051	Brown, B. F	Carriage bodies, hanging	Dec. 12, 1854	X.
11249	Brown, Collins B	Harvester rakes	July 11, 1854	I.
11001	Brown, Charles F	Soundings, deep-sea, instruments for taking	June 6, 1854	VII.
11250	Brown, Charles F	Blasting rocks	July 11, 1854	IX.
	Brown, Daniel B. (See Edward Seymour, assignor.)			
11191	Brown, David, assignor to J. F. Clark and D. Brown	Metal castings, machines for moulding for	June 27, 1854	II

10943	Brown, Edward, assignor to "The Scovill Manufacturing Company."	Hinges, machines for making	May 16, 1854	II.
11716	Brown, Edward	Goods, elastic	Sept. 26, 1854	XVI.
11352	Brown, Edward W	Looms	July 25, 1854	III.
11856	Brown, Ephraim	Burglars' alarm	Oct. 31, 1854	XXII.
	Brown, H., *et al.* (See Smith, Brown, and Read.)			
	Brown, Henry, and G. Smith. (See Smith & Brown.)			
	Brown, H. T., and R. Boeklen. (See Boeklen & Brown.)			
11470	Brown, Isaac W	Fire-arms	Aug. 8, 1854	XIX.
11317	Brown, Israel F	Gin, cotton, ribs	July 18, 1854	III.
10686	Brown, J. M., assignor to Samuel M. Folsom	Iron, smoothing, rotary	Mar. 21, 1854	XVII.
10982	Brown, John	Hot-water apparatus	May 30, 1854	V.
10464	Brown, John E., and S. S. Bartlett	Mortising machine	Jan. 24, 1854	XIV.
11929	Brown, Job	Cultivators	Nov. 14, 1854	I.
10400	Brown, L. A. and J. W	Veneering, press for	Jan. 10, 1854	XIV.
11826	Brown, Samuel W	Cotton, machinery for cleaning	Oct. 24, 1854	III.
12089	Brown, Samuel W	Condensers	Dec. 19, 1854	VI.
11404	Brown, Thomas	Cables, chain, arrangement of means for working and stoppering.	July 25, 1854; in England April 20, 1847.	VII.
10820	Brown, Thomas W	File or bill holder	April 25, 1854	XXII.
10972	Brown, Thomas W., assignor to Wm. W. Mead	Button-hole cutters	May 23, 1854	XXI.
11595	Bruce, Gardner A	Harvesters, maize	Aug. 29, 1854	I.
11955	Bruce, George	Type, casting	Nov. 14, 1854	XVIII.
11487	Bryent, Walter, assignor to John B. Kelsey	Furnace, air-heating	Oct. 24, 1854	V.
	Buckingham, C. P., and others. (See Jno. C. Reed, assignor.)			
10771	Buell, Julio T	Fish-hooks and artificial flies, attachment for	April 11, 1854	XXII.
10658	Bulkley, Ralph	Fires, compounds for extinguishing	Mar. 21, 1854	IV.
	Bulkley, Ralph	Life-preserver	May 8, 1840; extended May 6, 1854.	Extension.
267	Bulkley, Henry G.	Grain dryers	Mar. 2, 1852; re-issued June 27, 1854.	Re-issue.
11207	Bulkley, Henry G.	Evaporators, salt, construction of	July 4, 1854	IV.
11597	Bullard, E. W	Window-blind holder	Aug. 29, 1854	IX.
10570	Bullock, Smith W., assignor to Stillman, Allen, & Co.	Quartz crushers	Feb. 28, 1854	II.
11464	Bullock, William, assignor to Burton G. Morse	Planter, seed	Aug. 1, 1854	I.
11206	Bundy, Galusha J	Potato diggers	July 4, 1854	I.
10945	Burch, Joseph	Ships, constructing, for safety and escape	May 23, 1854	VII.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
	Burden, Henry	Puddle balls or other masses of iron in the manufacture of iron, machinery for rolling.	Dec. 10, 1840; extended Dec. 9, 1854.	Extension.
10533	Burdick, J. L	Books, blank, machinery for paging	Feb. 14, 1854	XVIII.
10822	Burdine, R	Pump, rotary	April 25, 1854	XI.
11319	Burgess, Hugh	Iron, coating with brass or copper	July 18, 1854; in England, Feb. 17, 1854.	II.
	Burgess, Hugh, and Charles Watt. (See Watt & Burgess.)			
643	Burgess, John, assignor to Geer & Co	Stove plates	April 25, 1854	Design.
640	Burleigh, M. C	Stoves, cooking, doors and panels of	April 25, 1854	Design.
	Burnett, Wm., and John Absterdam. (See Absterdam & Burnett.)			
10589	Burnett, Wm	Boilers, steam, arrangement of fusible plugs or disks for.	Mar. 7, 1854	VI.
	Burnham, D. B., and Joseph Frey. (See Frey & Burnham.)			
11688	Burnham, James S	Harvesters, maize	Sept. 19, 1854	I.
11345	Burns, Mary, administratrix of Robert Burns, jr., deceased.	Carriage springs for light vehicles	July 18, 1854; in England, June 7, 1853.	X.
10654	Burrage, Jonathan, assignor to J. Burrage and F. W. Newton.	Varnishes, processes for making	Mar. 14, 1854	IV.
	Burritt, J. C., and W. H. Akins, assignors to W. H. Akins. (See Akins & Burritt.)			
10442	Burt, Enoch	Looms, fancy check	Jan. 24, 1854	III.
10498	Burt, George C., assignor to George C. Burt and David C. Butterfield.	Bristles, machines for cleaning and assorting	Feb. 7, 1854	XVII.
10915	Burt, Henry, assignor to Newark Patent Hosiery Co.	Knitting-machines	May 16, 1854	III.
11233	Burt, Henry, assignor to Newark Patent Hosiery Co.	Knitting-machines	July 3, 1854	III.
11301	Burwell, Alfred	Shoes, &c., machinery for stretching	July 11, 1854	XVI.
10821	Buss, Charles	Fire-arms	April 25, 1854	XIX.
11240	Butterfield, Wm., assignor to W. Butterfield and Edgar M. Stevens.	Sewing-machines	July 4, 1854	III.

	Butterworth, Joshua H., and Jacob D. Woodruff. (See Woodruff & Butterworth.)			
11957	Cadwell, J. W	Boats, canal, arrangement of lever and catch for tow-lines of.	Nov. 14, 1854	VII.
11516	Cahill, John H	Range, hot-air, and side ovens	Aug. 15, 1854	V.
10678	Cameron, David A	Saws, belt	Mar. 21, 1854	XIV.
	Cameron. George S. (See Daniel Moore, assignor.)			
11003	Campbell, Henry R	Railroad tracks and wheels, combination of	June 6, 1854	IX.
10401	Campbell, Leonard	Gins, cotton	Jan. 10, 1854	III.
11848	Campbell, William, assignor to W. Campbell and E. W. Shippen.	Pulleys, bearings for loose	Oct. 24, 1854	XII.
283	Canby, Samuel	Winnowing-machines	Dec. 28, 1852; reissued Nov. 14, 1854.	Reissue.
10665	Cary, Augustus C., and Jeremiah Smith	Hydraulic engine	Mar. 21, 1854	XI.
11413	Carhart, Jeremiah	Metal of unequal thickness, method of uniting plates of.	Aug. 1, 1854	II.
	Carpenter, Cyrus. (See John E Grant, assignor.)			
11661	Carpenter, D	Engines, surface-condensers for marine	Sept. 12, 1854	VI.
11775	Carpenter, Jesse	Rope and cordage, spinning	Oct. 10, 1854	III.
11354	Carpenter, L. B	Lamp-fastenings	July 25, 1854	V.
11777	Carpenter, Samuel	Turning hubs, tool-handles, &c., machine for	Oct. 10, 1854	XIV.
11776	Carpenter, Stephen D	Pump, rotary	Oct. 10, 1854	XI.
10667	Carpenter, Thomas	Hullers, clover, concaves of	Mar. 21, 1854	I.
	Carroll, A. C., *et al.* (See Stephen Woodward, assignor)			
11192	Carter, Ira	Pump	June 27, 1854	XI.
10775	Carter, Thomas	Planters, seed	April 11, 1854	I.
11414	Carton, John, and Joseph Briggs	Furnaces, hot-air	Aug. 1, 1854	V
10513	Caryl, A. H	Flax, picking and cleaning	Feb. 14, 1854	III.
10882	Casselman, William J	Borer, hub	May 9, 1854	XIV.
11286	Casselman, William J., assignor to E. A. Swan	Stone, &c., marble, machines for carving	July 11, 1854	XV.
10790	Cathcart, James L	Propellers, attaching, to the driving shaft	April 18, 1854	VII.
11039	Cann, William	Mills, flouring, cleaning bolts of	June 6, 1854	XIII.
11412	Cayce, William	Locks, door	Aug. 1, 1854	II.
11199	Chadwick, William P	Presses, oil or blubber	July 11, 1854	XII.
10374	Chamberlain, Dexter H., assignor to Chamberlain & Hunt.	Saws, mode of banding pulleys for	Jan. 3, 1854	XIV.
10499	Chamberlain, Dexter H	Bit or drill-stocks	Feb. 7, 1854	II.
10500	Chamberlain, Dexter H	Tool-holders	Feb. 7, 1854	II.
10666	Chamberlain, Dexter H	Screw-wrenches	Mar. 21, 1854	II.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11633	Chamberlain, Dexter H, assignor to William R. Meshural.	Lamps, lard	Aug. 29, 1854	V.
	Chamberlain, George. (See Arad Woodworth.)			
	Chambers, E. H., and William F. Wilson. (See Washington Spangler, assignor.)			
10359	Champion, Samuel and Thomas	Paddle-wheels, feathering	Jan. 3, 1854	VII.
11322	Champion, Samuel and Thomas	Bridges	July 18, 1854	IX.
11031	Champion, Samuel and Thomas	Paddle-wheels, feathering	June 6, 1854	VII.
11356	Chapin, Thomas F	Plough	July 25, 1854	I.
11741	Chapman, Abner	Paddle-wheels	Oct. 3, 1854	VII.
11472	Chapman, Nathan	Presses, cotton	Aug. 8, 1854	XII.
11930	Chapman, Thomas M	Saws, mill, device for adjusting	Nov. 14, 1854	XIV.
11471	Chapman, William S	Carriages, preventing rattling in	Aug. 8, 1854	X.
	Chase *et al.* (See Allan and Stewart, assignors.)			
	Chase *et al.* (See Gibbs, assignor.)			
10958	Chase, Henry A	Wheels, locomotive, counterpoise to cast	May 23, 1854	X.
10700	Chatfield, Thomas W	Furnaces, hot-air	Mar. 28, 1854	V.
11410	Cherry, G. W	Stone saws	Aug. 1, 1854	XVI.
10515	Chichester, Lewis S	Wool, machine for cleaning	Feb. 14, 1854	III.
10772	Chichester, Lewis S	Flax and hemp, dressing	April 11, 1854	III.
11355	Chichester, Lewis S	Gins, cotton	July 25, 1854	III.
11059	Childs, Samuel	Distilling fatty bodies, stills for	June 13, 1854	IV.
11718	Chilson, Gardner	Heat generator and radiator	Sept. 26, 1854	V.
648	Chinnock, Charles	Clock-case fronts	May 16, 1854	Design.
650	Chinnock, Charles	Clock-case fronts, cast metal	May 23, 1854	Design.
651	Chinnock, Charles	Clock-cases, fronts of cast metal	May 23, 1854	Design.
670	Chinnock, Charles	Clock-case fronts	Oct. 17, 1854	Design.
671	Chinnock, Charles	Clock-case fronts	Oct. 17, 1854	Design.
672	Chinnock, Charles	Clock-case fronts	Oct. 17, 1854	Design.
10563	Chittenden, John W., and William C. Mead	Hoops, splitting, machines for	Feb. 28, 1854	XIV.
12090	Chubb, Thos. J	Metal-separators	Dec. 19, 1854	II.
10855	Churchman, W. H	Heaters, hydraulic	May 2, 1854	V.

10928	Cilley, N. W.	Gates, &c., method of hanging	May 16, 1854	IX.
11639	Clareni, Chas	Pulleys to shafts, attaching	Sept. 5, 1854	IX.
10957	Clark, Alfred T	Sashes, window, mode of balancing	May 23, 1854	VI.
10399	Clark, David	Engines, steam, oil-cups for	Jan. 10, 1854	
	Clark, David, and M. W. Baldwin. (See Baldwin & Clark)			
12092	Clark, D. W., and S. H. Gray	Pumps, force, double-acting	Dec. 19, 1854	XI.
11015	Clark, Edwin, and James M	Mills, flouring	June 6, 1854	XIII.
11037	Clark, Harrison O	Lathe	June 6, 1854	XIV.
10824	Clark, Henry	Printing-presses, machines for feeding sheets of paper to.	April 25, 1854	XVIII.
11656	Clark, Henry L	Cars, baggage, doors of	Sept. 5, 1854	X.
	Clark, J. F., and D. Brown. (See D. Brown, assignor.)			
11358	Clark, John	Spring and spring-catch for closing doors, arrangement of.	July 25, 1854	II.
11640	Clark, John	Chimney caps	Sept. 5, 1854	V.
11078	Clark, Lyman, assignor to L. Clark and Joseph Sawyer.	Boots, shoes, &c., instrument for trimming welts of	June 13, 1854	XVI.
10387	Clark, Patrick	Boilers, steam, regulating the damper of, by the pressure of the steam.	Jan. 3, 1854	VI.
11030	Clark, Patrick	Boilers, steam, water-level indicator for	June 6, 1854	VI.
12019	Clark, Patrick	Boiler alarms, steam	Dec. 5, 1854	VI.
	Clark, Edward, and J. M. Singer. (See Morey & Johnson.)			
11357	Clark, Wm	Bottles	July 25, 1854	XXII.
12091	Clarke, Major B	Gin, cleaning seed-cotton and feeding it to the	Dec. 19, 1854	III.
	Clampitt & Regester. (See Joshua Regester, assignor.)			
	Clayton, Eli, and George Yates. (See Yates & Clayton.)			
10623	Clegg, Thomas, assignor to Thomas Clegg and Nathaniel Stevens.)	Looms, wire heddle-eyes for	Mar. 7, 1854	III.
11285	Clegg, Thomas, assignor to Clegg & Stevens	Heddle-eyes, wire, machines for making	July 11, 1854	III.
11300	Clemens, S. A	Pumps, valvular, arrangement for diaphragm	July 11, 1854	XI.
11857	Clemson, Wm	Saws, apparatus for tempering and flattening	Oct. 31, 1854	XIV.
10469	Cleveland, William	Pens, fountain	Jan. 31, 1854	XVIII.
11473	Close, Daniel	Planing and sawing machine	Aug. 8, 1854	XIV.
11434	Coats, G. W., and J. Russell	Card teeth, machines for sticking	Aug. 1, 1854	III.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11988	Cochran, J. W.	Quartz-crusher	Nov. 28, 1854; in England, Nov. 21, 1853.	II.
11208	Coes, Aury G.	Screw-wrenches	July 4, 1854	II.
639	Coggeshall, William T.	Stoves, cooking	April 18, 1854	Design.
	Cole, *et al.* (See Newman, *et al.*)			
	Cole, *et al.* (See Newman, *et al.*)			
	Cole, *et al.* (See Newman, *et al.*)			
11359	Colehamer, George A.	Lubricating compound	July 25, 1854	XII.
11360	Coles, Thomas	Omnibus-step protector	July 25, 1854	X.
11183	Collier, Wm. F., assignor to W. F. Collier and Jos. Boyden.	Printing presses, machines for feeding paper to	June 27, 1854	XVIII.
11146	Collins, S V., assignor to W. O. Hickok	Ruling paper, mode of setting and holding pens for	June 20, 1854	XVIII.
10361	Collman, John	Ruling machine	Jan. 3, 1854	XVIII.
10388	Collyer, Robert H.	Quartz pulverizer	Jan. 3, 1854	II.
11034	Collyer, Robert H.	Gold amalgamators	June 6, 1854	II.
10565	Colver, Lewis W.	Planters, seed	Feb. 28, 1854	I.
11662	Colver, Nathaniel	Boots and shoes	Sept. 12, 1854	XVI.
10756	Colwell, Stephen	Buildings, iron	April 11, 1854	IX.
11320	Conard, Lewis R.	Valves, block, slide, for steam-engines	July 18, 1854	VI.
10564	Conger, John P.	Salt kilns	Feb. 28, 1854	IV.
10541	Connelly, E. G.	Sash-bolt, curved	Feb. 21, 1854	II.
10791	Conner, G. M.	Water-wheel	April 18, 1854	XI.
11689	Conrad, Charles J.	Shingles, method of sawing	Sept. 19, 1854	XIV.
10443	Constant, Silas	Lamps, rosin oil	Jan. 24, 1854	V.
11060	Constant, Silas	Lens lamp chimney	June 13, 1854	V.
11474	Constant, Silas	Lamps, rosin oil	Aug. 8, 1854	V.
10691	Cook, A. J.	Harvesters, discharge apparatus of	Mar. 28, 1854	I.
10358	Cook, Alfred C.	Sawing bevel surfaces, machine for	Jan. 3, 1854	XIV.
10591	Cook, Caleb	Engines, locomotive, arrangement of valve-motion for	Mar. , 1854	VI.
10520	Cook, Thomas, assignor to Starkie & Livesay	Fire-arms	Feb. 14, 1854	XIX.
	Cooke, J. R. (See J. Jenkins.)			
10875	Coon, Simeon	Sewing-machines	May 9, 1854	III.

10781	Coons, Matthias P.	Fences, iron	April 18, 1854	II.
11012	Coons, Matthias P.	Fences, wire, rivet clamp for	June 6, 1814	II.
11517	Coons, Matthias P.	Brakes, railroad car	Aug. 15, 1854	X.
11931	Coons, Matthias P.	Fence, multigrade iron	Nov. 14, 1854	II.
10595	Cooper, George W	Planters, cotton-seed	Mar. 7, 1854	I.
	Cooper, John L. (See Arad Aldrick, assignor.)			
11210	Copeland, A. S. T.	Saw-mill carriages, mechanism for operating	July 4, 1854	XIV.
	Copeland, George A., *et al.* (See Philo Washburn, *et al.*)			
11719	Copeland, George	Loom-harness, clasps for	Sept. 26, 1854	III.
11773	Corliss, Albert G.	Piano-fortes, swell-mute attachments to	April 11, 1854	XVIII.
11663	Cornell, John B.	Shutters, slat, metallic	Sept. 12, 1854	IX.
11720	Corwin, Joseph A.	Knitting-machines	Sept. 26, 1854	III.
10825	Cottam, George H.	Bedsteads, chair, portable folding	April 25, 1854	XVII.
11050	Coutaret, Dominique E.	Acid, sulphuric, manufacture of	June 13, 1854	IV.
	Cowan, Benjamin F. (See George W. Grader.)			
	Cowles, Edward P., and H. A. Harvey, administrators of Thomas W. Harvey, assignors to the Harvey Steel & Iron Company. (See Thomas W. Harvey.)			
	Cox, Hagar & Cox. (See Wm. P. Gray, assignor.)			
11209	Cox, Thomas	Felloes, machine for bending	July 4, 1854	XIV.
10856	Crabtree, John	Engines, steam, adjusting the packing of pistons for	May 2, 1854	VI.
11887	Craig, Robert S.	Traps for animals	Nov. 7, 1854	XXII.
11664	Craig, William	Engines, oscillating	Sept. 12, 1854	VI.
11989	Cram, John	Clothes-horse, towel-stand, or	Nov. 28, 1854	XVII.
	Crandall, Asa, and Nathan Smith. (See Smith & Crandall)			
11932	Crandall, Horace J.	Docks, dry, sectional, or railway, mode of adjusting the keel-blocks of.	Nov. 14, 1854	IX.
12020	Crandall, Horace J.	Sails, top, arrangement for reefing	Dec. 5, 1854	VII.
12093	Crandall, Horace J.	Docks, bilge supporters for holding vessels in	Dec. 19, 1854	IX.
10360	Crandall, Isaac	Wagons, &c., running-gear of	Jan. 3, 1854	X.
11518	Crane, Aaron D.	Forms, irregular, machines for turning	Aug. 15, 1854	XIV.
	Crane, Aaron D.	Clocks, improvements in the method of constructing.	Feb. 10, 1841; antedated Dec. 22, 1840; extended Dec. 15, 1854.	Extension.
11990	Crawford, A. B.	Clover hullers	Nov. 28, 1854	I.
11117	Crawford, Benjamin	Engines, high-pressure steam	June 20, 1854	VI.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11742	Cresson, Chas. M.	Gas retorts, form of	Oct. 3, 1854	IV.
	Cresson, W. P., & Co. (See Beesley, Jacob.)			
	Cresson, W. P., & Co. (See Stuart, David.)			
	Cresson, *et al.* (See Allan & Stuart, assignors.)			
	Cresson, *et al.* (See Allan & Stuart, assignors.)			
	Cresson, *et al.* (See Beesley & Delaney, assignors.)			
	Cresson, *et al.* (See Beesley & Delaney, assignors.)			
	Cresson, *et al.* (See Joseph Stuart, assignor.)			
	Cresson & Co. (See Teal & Tyler, assignors.)			
	Crever, J. A., and O. Newton. (See Newton & Crever.)			
12052	Cridge, Matthew, and Samuel Wadsworth	Engines, steam, oscillating	Dec. 12, 1854	VI.
273	Crocker, Samuel L.	Cut-nails from Muntz metal	April 17, 1849; reissued August 1, 1854.	Reissue.
11933	Crompton, George	Looms for weaving figured fabrics	Nov. 14, 1854	III.
11956	Crompton, George, and M. A. Furbush	Looms, rollers for pattern chains	Nov. 14, 1854	III.
	Crompton, William, assignor to Furbush & Crompton	Looms, power	Nov. 25, 1837; extended & reissued Sept. 13, 1853; disclaimer entered Feb. 1, 1854.	Disclaimer.
10501	Crook, John J	Tin foils or sheets	Feb. 7, 1854	II.
11265	Crosby, Harvey & S. E.	Cistern arches, arch boards for, mode of arranging	July 11, 1854	IX.
10878	Crosby, Heman, jr.	Sewing-machines	May 9, 1854	III.
	Cross, J., and J. B. Larwell. (See Larwell & Cross.)			
10633	Cross, Joshua	Faucets for measuring liquids	Mar. 14, 1854	XI.
11153	Cross, S. Oscar	Grape-frame	June 27, 1854	I.
11038	Crossley, Thomas	Weaving cut-pile fabrics	June 6, 1854	III.
11118	Crossley, Thomas	Printing woolen and other goods, machine for	July 18, 1854	XVIII.
11321	Crossley, Thomas	Printing-blocks, method of making	July 18, 1854	XVIII.
11564	Crossley, Thomas	Carpets, two-ply, manufacturing	Aug. 22, 1854	III.
11634	Crowell, James E., assignor to J. E. Crowell, E. Smith, and C. T. Stickney.	Dressing ship timber, machine for	Aug. 29, 1854	

12021	Crowell, Joseph D	Steering apparatus	Dec. 5, 1854	VII.
11211	Crozier, Archibald H	Barrels, machine for creasing and bevelling	July 4, 1854	XIV.
11247	Crozier, C. W	Camphor-wash mixtures	July 11, 1854	IV.
12053	Cumberland, William W	Metal, machines for bending	Dec. 12, 1854	II.
10403	Cummings, D. M	Mortising frames and window blinds, machinery for	Jan. 10, 1854	XIV.
11519	Cummings, D. M	Rakes	Aug. 15, 1854	I.
	Cunningham, James V., and James J. Johnston.—(See Johnston & Cunningham.)			
10444	Cunningham, William	Washing-machines	Jan. 24, 1854	XVII.
	Curtis, F. & Co. (See John Williams, assignor.)			
10959	Curtis, James	Mill, wind	May 23, 1854	XIII.
11212	Currier, Thomas W	Bedsteads, cribs, and sofas	July 4, 1854	XVII.
11411	Cushman, E. and J. R	Drying thick paper	Aug. 1, 1854	V.
10476	Cutler, T. O	Quartz-crushers	Jan. 31, 1854	II.
12054	Cutler, T. O	Mineral and other substances, machines for crushing and grinding.	Dec. 12, 1854; in England, January 23, 1854.	II.
11213	Cutting, James A	Photographic pictures, the preparation of collodion for.	July 4, 1854	XVIII.
11266	Cutting, James A	Photographic pictures, compositions for making	July 11, 1854	XVIII.
11267	Cutting, James A	Photographic pictures on glass	July 11, 1854	XVIII.
11475	Cutting, Lewis	Speeders, stop-motion for	Aug. 8, 1854	III.
10324	Daboll, Charles M., assignor to C. M. and A. P. Daboll.	Brace-stocks, catch for holding the bit in	May 16, 1854	II.
11778	Dale, John D	Planing-machines	Oct. 10, 1854	XIV.
	Dalrymple, W., executor of Samuel Sawyer, deceased. (See Samuel Sawyer.)			
11193	Dalson, A. F	Evaporators, milk and other	June 27, 1854	IV.
11721	Dame, John	Parrel and bows	Sept. 26, 1854	VII.
10833	Damerel, William	Locks, door, extension bit guard-key for	May 9, 1854	II.
10926	Dana, Charles H	Potato-diggers	May 16, 1854	I.
11361	Dana, Charles H	Cultivator	July 25, 1854	I.
11641	Dana, Charles H	Planters, seed	Sept. 5, 1854	I.
12055	Danforth, Charles	Cotton, throstles for spinning	Dec. 12, 1854	III.
10961	Danforth, Loring	Book-covers, machines for making	May 23, 1854	XVIII.
	Daniels, Reuben	Cloth, machine for reducing worn out cloths and silks of various kinds to the fibrous state, so as to be capable of being manufactured into.	Oct. 10, 1840; extended September 29, 1854.	Extension.
11888	Daniels, Reuben	Wheels, water, improved joint in	Nov. 7, 1854	XI.
10649	Daniels, Westel S	Obstetrical supporters	Mar. 14, 1854	XX.
11521	Darling, Cook	Hubs to axles, mode of securing	Aug. 15, 1854	X.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10402	Darling, Daniel S	Dust, preventing, from entering railroad cars	Jan. 10, 1854	V.
11246	Darling, Martin V. B	Engines, steam, slide-valve motion of	July 11, 1854	VI.
12045	Darracott, Franklin, assignor to Geo. Darracott	Gas, dry, meters	Dec. 5, 1854	IV.
11462	Daser, Louis	Planters, seed	Sept. 5, 1854	I.
10679	Daugherty, Thomas	Lasts, shoe	Mar. 21, 1854	XVI.
11453	Daugherty, Thomas	Lasting instruments	Aug. 1, 1854	XVI.
11961	David, Henry Farson	Pans, sauce	Nov. 21, 1854	XVII.
10788	Davis, Ari	Box-machine	April 18, 1854	XIV.
11415	Davis, Ari	Electric, magneto. machines	Aug. 1, 1854	VIII.
10960	Davis, Elias	Press power, self-acting	May 23, 1854	XII.
10902	Davis, Francis, assignor to J. M. Reed	Jacks, screw	May 9, 1854	XII.
11690	Davis, John	Telegraphic keys	Sept. 19, 1854	VIII.
11476	Davis, Joseph H	Pigments, manufacturing, from iron ore	Aug. 8, 1854	IV.
10502	Davis, Lewis S	Collars, horse, blocks for	Feb. 7, 1854	XVI.
10566	Davis, Robert W	Churns	Feb. 28, 1854	I.
	Davis, Thomas T., and others. (See Sam'l B. Howd.)			
11032	Davis, Waitman	Planters, seed	June 6, 1854	I.
10470	Davis, William O	Presses for moulding glass	Jan. 31, 1854	XII.
10426	Davison, F	Pumps, saliva	Jan. 17, 1854	XX.
11889	Davison, Ferdinand	Stone-drilling machines	Nov. 7, 1854	XV.
11119	Day, Benjamin F	Engines, steam	June 20, 1854	VI.
11520	Day, B. Franklin	Press, hand	Aug. 15, 1854	XVIII.
11022	Day, Edward P	Print subscribers' names, &c., on newspapers, machine to	June 6, 1854	XVIII.
11477	Day, Joseph C	Fire-arms	Aug. 8, 1854	XIX.
10884	Dean, Heman H	Felloe machine	May 9, 1854	XIV.
	Dean, Horace C. (See Alonzo S. Woodward)			
10920	Dederick, Levi	Presses, hay and cotton	May 16, 1854	XII.
[illegible]	Dederick, Levi	Presses, hay	June 6, 1854	XII.
[illegible]	[illegible]	Streets, machine for cleaning and watering	June 6, 1854	XXII.
[illegible]	[illegible]	Stone-saws, circular	Oct. 3, 1854	XV.

	Delaney, E. J., and J. Beesley. (See Beesley and Delaney, assignors.)			
	Delaney, E. J., and J. Beesley. (See Beesley and Delaney, assignors.)			
10471	Denney, Samuel L.	Axles, railroad, divided,	Jan. 31, 1854	X.
11214	Dennis, Dexter	Hats, finishing palm-leaf	July 4, 1854	III.
10445	Dennis, John H.	Beehives	Jan. 24, 1854	I.
11522	Dennison, Aaron L.	Punches and dies for punching watch-hands	Aug. 15, 1854	II.
11116	Deputy, H. C.	Vessels, draughting and modelling	Aug. 1, 1854	VII.
10381	Desbeaux, Claude	Books, apparatus for turning leaves of	Jan. 3, 1854	XVIII.
10503	Deschamps, F. O.	Omnibus registers	Feb. 7, 1854	X.
11362	Deuble, George	Clocks, steeple, striking part of	July 25, 1854	VIII.
11745	Devlan, Patrick S.	Brick-machines	Oct. 3, 1854	XV.
11827	Devlan, Patrick S.	Chairs for round rails	Oct. 24, 1854	IX.
10794	De Saxe, Charles, assignor to Thomas H. Bate	Fishing-rods and floats	April 18, 1854	XXII.
10795	De Saxe, Charles, assignor to Thomas H. Bate	Landing-net for anglers	April 18, 1854	XXII.
635	De Zouche, Isaac, assignor to Louis Potter	Stoves, &c., panel ornament for	Mar. 14, 1854	Design.
6 5	De Zouche, Isaac.	Brackets	Oct. 31, 1854	Design.
11598	Dickey, Julius C.	Saddle-trees, fastening skirts to	Aug. 29, 1854	XVI.
	Dickinson, Charles, and William Hattersley. (See Hattersley and Dickinson.)			
11363	Dickinson, Charles W.	Dies, finishing, in machines for making rings from sheet-metal.	July 25, 1854	II.
10487	Dickinson, Isaac L.	Churns	Jan. 31, 1854	I.
11665	Dickson, Perry	Millstone dress	Sept. 12, 1854	XIII.
10362	Dillehay William S.	Straw-cutters	Jan. 3, 1854	I.
10364	Dimpfel, F. P.	Boiler, steam, furnaces	Jan. 3, 1854	VI.
10786	Dixwell, Basil, and J. A. Dorr	Gas regulators	April 18, 1854	V.
	Dodd, B., *et al.* (See William Lyon, assignor.)			
11061	Dodge, Nathaniel	Tanning apparatus, construction of	June 13, 1854	XVI.
11154	Dodge, Thomas H.	Gas and liquid regulators	June 27, 1854	IV.
11364	Dole, L. A.	Lathe-chuck, arrangement for	July 25, 1854	XIV.
10363	Donlevy, John	Printing, polychromatic, method of forming plates for	Jan. 3, 1854	XVIII.
11048	Donovan, D, administrator of W. G. Hallman and D. Donovan, assignors to Henry J. White.	Range, cooking	June 6, 1854	V.
	Doran, M. W. E., and W. H. Morrison. (See Morrison & Doran.)			
	Dorr, J. A, and B. Dixwell. (See Dixwell & Dorr.)			
661	Douglass, William and Benjamin	Well-curbs	July 11, 1854	Design.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11722	Drayton, John	Bedstead fastenings	Sept. 26, 1854	XVII.
11239	Drayton, Thomas, assignor to Geo. W. McCready, jr.	Oil, purifying	July 4, 1854	IV.
10446	Driggs, Spencer B	Piano-fortes, attachment to	Jan. 24, 1854	XVIII.
11021	Dudley, Samuel H	Scrapers, road	June 6, 1854	IX.
11599	Dudrey, J. B	Stave-machine	Aug. 29, 1854	XIV.
11600	Dudrey, J. B	Stave-machine	Aug. 29, 1854	XIV.
257	Dugdale, Samuel G	Gates, opening and closing, apparatus for	Oct. 11, 1853; re-issued Jan. 31, 1854.	Re-issue.
110	Dugdale, Samuel G	Gates, apparatus for opening and closing	Oct. 11, 1853: re-issued Jan. 31, 1854; additional improvem't Mar 7, 1854.	Additional improvem't.
11828	Dulaney, George L	Mill-bushes	Oct. 24, 1854	XIII.
	Dunham, A. T. & Co. (See —— Vedder, assignor.)			
11779	Dunham, Edwin G	Drill, rock	Oct. 10, 1854	XV.
10733	Eakins, Benjamin	Valve-cock	April 4, 1854	XI.
11548	Earle, Absalom B	Straw cutters	Aug. 22, 1854	I.
11829	Earle, Absalom B	Planters, seed	Oct. 24, 1854	I.
11420	Earle, John E	Compasses and callipers	Aug. 1, 1854	VIII.
11643	Eastman, Augustus M	Ribbon of strips of cloths, making	Sept. 5, 1854	III.
	Easterly, D. L. (See Schuyler & Zern, assignors.)			
10567	Eaton, A. K	Ores, pulverizing, machines for	Feb. 28, 1854	II.
10734	Eaton, A. K	Gold and silver, amalgamating	April 4, 1854	II.
660	Eaton, Harrison, assignor to James Hartshorne and W. Ames.	Stove, cooking	July 11, 1854; antedated June 20, 1854.	Design.
	Eaton, Samuel A., John F. Augustus, and D. F. Mellen. (See Dustin F. Mellen, *et al.*)			
10925	Eaton, Ward	Glaziers' points, machines for cutting	May 16, 1854	II.
11194	Eberhardt, Jonas	Archil, preparation of	June 27, 1854	IV.
112	Eccles, Samuel and James	Looms	Aug. 3, 1852; additional improvement Aug. 1, 1854.	Additional improvem't.
11780	Eckert, Augustus	Bells, alarm, magnetic	Oct. 10, 1854	XXII.
11691	Eddy, Henry	Beehives	Sept. 19, 1854	I.

10941	Edmondson, Joseph, and C. Haworth, executors of T. Edmondson, deceased.	Case for holding railway and other tickets	May 16, 1854	X.
10947	Edmondson, Joseph, and C. Haworth, executors of T. Edmondson, deceased.	Printing railway and other tickets, machine for	May 23, 1854	XVIII.
10746	Edson, Jacob	Pumps	April 4, 1854	XI.
10855	Edson, Jacob	Pumps	May 9, 1854	XI.
11417	Efferenn, John J	Sawing fire-wood, machine for	Aug. 1, 1854	XIV.
11215	Eisenbrandt, C. H	Musical instruments, valve for wind	July 4, 1854	XVIII.
10774	Elgar, John	Hinges, door	April 11, 1854	II.
11991	Elliers, Augustus	Seats for public buildings	Nov. 28, 1854	IX.
11806	Elliot, Joseph D	Water meter	Oct. 17, 1854	XI.
11692	Elliott, William G	Slag ware, making	Sept. 19, 1854	II.
11156	Ellis, J. A. H., and Alexander Gordon	Capstans, reversible	June 27, 1854	VII.
11323	Ellis, J. A. H., and Alexander Gordon	Excavating machines, mode of operating	July 18, 1854	IX.
11549	Ellis, William M	Engine, steam, arrangement of the	Aug. 22, 1854	VI.
10812	Ells, Josiah	Fire-arms, revolving	April 25, 1854	XIX.
11419	Ells, Josiah	Fire-arms, revolving breech	Aug. 1, 1854	XIX.
10692	Ellsworth, H. G	Belt clasps for machinery	Mar. 28, 1854	XII.
	Ely, A. B. (See Bagin, assignor.)			
	Ely, A. B. (See Bagin, assignor.)			
	Ely, A. B. (See F. C. Goffin.)			
	Ely, A. B. (See F. C. Goffin.)			
	Ely, A. B. (See F. C. Goffin, assignor.)			
	Ely, A. B. (See F. C. Goffin, assignor.)			
11046	Ely, H., assignor to S. P. Ely	Drying flour	June 6, 1854	V.
10775	Emerson, R. H	Cars, earth	April 11, 1854	X.
11418	Emmons, Phineas	Crackers, machines for moulding	Aug. 1, 1854	XVII.
10389	Englebrecht, Theodore F	Hinges, spring, double-acting	Jan. 3, 1854	II.
11023	English, Francis M	Whiffle-trees	June 6, 1854	X.
10881	Enoch, George T., and Daniel Wissinger	Planters, seed	May 16, 1854	I.
11325	Enos, Roswell	Tanning	July 18, 1854	XVI.
11324	Erdle, Jacob	Windmill	July 18, 1854	XI.
10634	Espenchade, Frederick	Locomotives, exhaust-pipes of, tapering nozzles to the.	Mar. 14, 1854	VI.
11155	Esterly, George	Harvesters, grass	June 27, 1854	I.
	Eunson, R. G., and Jno. Myers. (See Myers & Eunson.)			
11854	Evarts, Harry H., assignor to himself and A. J. Brown.	Shingle machine	Oct. 31, 1854	XIV.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11436	Everett, Eliza A., and S. T. Thomas, administrators of Edward Everett, deceased.	Yarns, warping and dressing	Aug. 1, 1854	III.
	Everett, Eliza Ann, administratrix of E. Everett, deceased. (See S. T. Thomas.)			
11962	Everitt, Chas. G	Metal boxes, sheet, machine for closing	Nov. 21, 1854	II.
11601	Ewing, O. G	Ploughs	Aug. 29, 1854	I.
11062	Faas, Anthony	Accordeons	June 13, 1854	XVIII.
10650	Fagin, Lewis	Smut machines	Mar. 14, 1854	XIII.
10790	Fairchild, J. H., and Sylvanus Richardson	Potato-washing machine	April 18, 1454	XVII.
10984	Fairchild, J. H	Hooks and eyes	May 30, 1854	XXI.
	Fairman, Simon	Lathes, chuck for, expanding or contracting, or universal.	July 18, 1840; extended July 17, 1854.	Extension.
11603	Fanning, Richard	Saws, cross-cut, method of grinding	Aug 29, 1854	XIV.
11735	Farley, Henry W	Railroad frog-guards	April 4, 1854	IX.
10857	Farley, Henry W	Engines, locomotive, means for adjusting the valves of	May 2, 1854	VI.
	Farmer, M. G., and J. M. Batchelder. (See Batchelder & Farmer.)			
10886	Farr, Chas. K	Cultivators	May 9, 1854	I.
11454	Farr, Chas. K	Cultivator	Aug. 1, 1854	I.
	Farr & Thompson. (See Mansure, assignor.)			
11602	Fawkes, Joseph W	Manure and lime spreaders	Aug. 29, 1854	I.
10472	Fay, Cyrus J	Presses, cotton	Jan. 31, 1854	XII.
11120	Fay, Samuel	Weaving double cloth	June 20, 1854	III.
11992	Felter, Fletcher	Paddle-wheels, feathering	Nov. 28, 1854	VII.
10817	Field, Frederick	Bridges, travelling	April 25, 1854	IX.
10624	Field, George B	Cultivators, rotary	Mar. 14, 1854	I.
10789	Field, Samuel J	Painting window blinds, &c., apparatus for	April 18, 1854	XVIII.
10404	Fillmore, Charles W	Clamps for holding steel plates while being hardened and tempered.	Jan. 10, 1854	II.
10887	Fink, Albert	Bridges	May 9, 1854	IX.
11216	Finkle, William	Mill-stone dress	July 4, 1854	XIII.
10607	Fisher, Luther B	Planters, seed	Mar. 7, 1854	I.

10694	Fisher, Luther B.	Planters, seed	Mar. 28, 1854	I.
11365	Fishwick, James and John	Saws, mode of driving and straining	July 25, 1854	XIV.
11478	Fisk, George C.	Boards, device for grooving	Aug. 8, 1854	XIV.
11313	Fiske, Orin W.	Board, paste, machinery for making	July 11, 1854	XVIII.
10695	Fitts, Benaiah	Boilers, steam, feed-water apparatus for	Mar. 28, 1854	VI.
	Fitts, Robert B., and —— Whipple. (See M. D. and L. W. Whipple.)			
12094	Fitzgerald, Daniel, Thomas Rogers, and William C. Walker.	Boats, ferry, guards for	Dec. 19, 1854	VII.
	Fitzgerald, W. P. N. (See Allen B. Wilson, assignor.)			
10693	Fitzhugh, Benjamin G.	Harvesters of grain	Mar. 28, 1854	I.
	Fitzpatrick, Wm., and Joseph Iler. (See Iler & Fitzpatrick.)			
	Flanagan, John, and Daniel Ryan. (See Ryan & Flanagan.)			
10801	Flanders, David and Samuel K.	Fly-trap	April 18, 1854	XXII.
11604	Flanders, Jos. F., and Jeremiah A. Marden	Leather-splitting machines	Aug. 29, 1854	XVI.
10736	Flanders, Phanuel	Winnowers, cranberry	April 4, 1854	I.
11013	Flanders, W. A.	Moth-killer	June 6, 1854	I.
11366	Folsom, Charles	Tables, reading	July 25, 1854	XVII.
	Folsom, Samuel M. (See J. M. Brown, assignor.)			
10668	Fondé, Charles H., and Thomas B. Lyons	Dredging-machines	Mar. 21, 1854	IX.
11268	Foote, George F.	Ventilating railroad cars	July 11, 1854	V.
11605	Forbes, J. T.	Bedsteads for invalids	Aug. 29, 1854	XVII.
11217	Forbes, Robert B.	Lightning-rods for vessels	July 4, 1854	VIII.
11830	Ford, Ebenezer	Granaries	Oct. 24, 1854	I.
10782	Forsythe, Thomas P.	Cloth, machines for winding and folding	April 18, 1854	III.
10554	Foster, James, jr., assignor to Platt Evens, jr.	Presses, seal	Feb. 21, 1854	XII.
10542	Foster, John T.	Stone-picking machines	Feb. 21, 1854	XV.
11859	Foster, Junius	Burglars' alarm	Oct. 31, 1854	XXII.
11644	Foster, William H.	Sails, top, from the deck of the vessel, arrangement for reefing and furling.	Sept. 5, 1854	VII.
11781	Fowler, Thaddeus	Sewing-pin	Oct. 10, 1854	XXII.
10888	Fox, Charles R.	Saw-mill carriage, journal box for	May 9, 1854	XIV.
271	Fox, Charles R.	Sawing-machines	May 9, 1854; reissued July 18, 1854.	Reissue.
1479	Frary, Orange N.	Melodeons	Aug. 8, 1854	XVIII.
1963	Freeland, James	Valve-gear for locomotive engines	Nov. 21, 1854	VI.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
107	Freeman, Edmund L	Bog-cutters	June 21, 1853; additional improvem't Jan. 3, 1854.	Addt'l imp't.
11245	French, Elisha	Coal sifter	July 11, 1854	V.
	French, Ephraim, and J. Holmes. (See Holmes & French.)			
12056	French, G. W., and William Wagstaff	Vermin, method of destroying	Dec. 12, 1854	XXII.
11218	Frey, Joseph, and D. B. Burnham	Battery, sub-marine	July 4, 1854	IX.
10905	Frisbee, Hiram	Lath-machine	May 16, 1854	XIV.
668	Fry, Henry, assignor to Samuel Maxwell	Traps, mole	Sept. 12, 1854	Design.
11270	Fry, Robert T	Ink-stands, the construction of	July 4, 1854	XVIII.
11693	Fulghum, Benjamin	Sawing-machine	Sept. 19, 1854	XIV.
11277	Fullerton, William H	Hackling corn-husks	July 11, 1854	III.
11480	Fulton, John G	Packing-machines, salt	Aug. 8, 1854	XII.
	Furbush, M. A. (See George Crompton.)			
	Furbush, M. A., and George Crompton. (See Wm. Crompton, assignor.)			
12095	Gage, John S	Harvesters, clover	Dec. 19, 1854	I.
11372	Gaines, E. P	Mill-stone dress	July 25, 1854	XIII.
11367	Gale, Alanson	Mowing-machine	July 25, 1854	I.
10592	Gale, Warren	Straw cutters	Mar. 9, 1854	I.
11667	Gale, Warren	Straw-cutters	Sept. 12, 1854	I.
	Gallaher, J. J., and R. H. Harrison. (See R. H. Harrison, assignor.)			
11993	Gallagher, C. B	Motion, converting reciprocating into rotary	Nov. 28, 1854	XIII.
10858	Gallagher, John	Cutter for metallic bars and rods	May 2, 1854	II.
11287	Gallahue, A. C	Boots and shoes, machines for pegging	July 11, 1854	XVI.
10685	Gardiner, Heman	Quartz crushers	July 4, 1854	II.
11219	Gardiner, Heman	Quartz crushers	Mar. 21, 1854	II.
11368	Gardiner, Samuel, jr	Ores, &c., machinery for crushing and pulverizing	July 25, 1854	II.
	Gardiner, W. A. (See Loomis, Joseph G.)			
10669	Garlington, J. L	Grain threshers	Mar. 21, 1854	I.
10608	Gaston, J. C	Planters, seed	Mar. 7, 1854	I.

12057	Gates, Moses	Hoes	Dec. 12, 1854	I.
11606	Gates, Nelson	Hinges, cast	Aug. 29, 1854	II.
10737	Gates, Wm. jr., and H. J. Harwood	Matches, friction, machines for making	April 4, 1854	IV.
11860	Gates, Wm. jr.	Match-frames, machine for filling	Oct. 31, 1854	IV.
11666	Gatley, Joseph	Pumps, &c., rotary, piston or valve for	Sept. 12, 1854	XI.
10889	Gavitt, Nelson	Paper, machinery for cutting	Mar. 9, 1854	III.
	Geer & Co. (See John Burgess, assignor.)			
11481	Gemmil, John	Radiators	Aug. 8, 1854	V.
11209	Gengembre, H. P	Cement of boiled coal-tar and earth	July 11, 1854	IV.
11298	Genung, Robert W	Jacks, lifting	July 11, 1854	XII.
	George, D. J., and N. Millington. (See Millington & George.)			
11203	Gesner, Abraham, assignor to the Asphalte Mining and Kerosene Gas Co.	Kerosene burning fluids, A	June 27, 1854	IV.
11204	Gesner, Abraham, assignor to the Asphalte Mining and Kerosene Gas Co.	Kerosene burning fluids, C	June 27, 1854	IV.
11205	Gesner, Abraham, assignor to the Asphalte Mining and Kerosene Gas Co.	Kerosene burning fluids, B	June 27, 1854	IV.
11523	Gibbs, Joshua	Ploughs	Aug. 15, 1854	I.
647	Gibbs, S. W., assignor to North, Chase & North	Ranges, summer, doors of gas-ovens or	May 9, 1854	Design.
11369	Gibson, Abram J	Vehicles	July 25, 1854	X.
11424	Gibson, Abram J	Vehicles, mode of attaching thills and poles to	Aug. 1, 1854	X.
11425	Gibson, Abram J	Vehicles, mode of attaching whiffletrees to	Aug. 1, 1854	X.
11668	Gibson, A. J	Carriages, coupling for	Sept. 12, 1854	X.
10390	Gilbert, Banford	Corn-shellers	Jan. 3, 1854	I
11281	Gillett, Thos. W., assignor to John Matthews	Bottles, corking, apparatus for	July 11, 1854	XXII.
	Gilson, R. H., and J. L. Rowley. (See —— Rowley, assignor.)			
11645	Ginn, Jonathan C	Rigging, machinery for worming	Sept. 5, 1854	VII.
11739	Gitchell, D. W., assignor to John C. Wagstaff	Felt garments, seamless, uniting bats for making	Sept. 26, 1854	III.
10543	Glading, William P	Oar-locks	Feb. 21, 1854	VII.
10816	Glass, George W	Wheels, cast-iron car	April 25, 1854	X.
11121	Gleason, F. A	Musical instruments, reed, construction of	June 20, 1854	XVIII.
117	Gleason, F. A	Musical instruments, reed, the construction of	June 20, 1854; additional improvement Nov. 14, 1854.	Addt'l imp't.
11221	Gleason, Joel	Milk-strainer	July 4, 1854	XVII.
11607	Gleason, John	Valves, slide, for steam-engines	Aug. 29, 1854	VI.
10555	Gledhill, John	Hair, treating, for weaving	Feb. 21, 1854	III.
11421	Glover, W. R	Pen	Aug. 1, 1854	XVIII.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10859	Goddard, Curtis	Bed-pins, machine for making	May 2, 1854	XIV.
10405	Goffin, F. C., assignor to A. B. Ely	Vault and safe doors, attaching cross-bar fastenings to	Jan. 10, 1854	II.
10660	Goffin, F. C., assignor to A. B. Ely	Locks, safe	Mar. 21, 1854	II.
263	Goffin, F. C., assignor to A. B. Ely	Safes, fire and burglar-proof	Feb. 14, 1854; reissued April 25, 1854.	Reissue.
11190	Goffin, F. F., assignor to Alfred B. Ely	Vaults, safes, and banks, powder-channel to doors of	June 27, 1854	II.
10517	Goffin, F. C	Safes, fire and burglar-proof	Feb. 14, 1854	II.
11423	Gold, B. F	Buildings, lathing	Aug. 1, 1854	IX.
11747	Gold, Stephen J	Warming houses by steam	Oct. 3, 1854	V.
12058	Good, John	Coffins	Dec. 12, 1854	XXII.
10536	Goodman, Allen, and Lyman Wheeler	Veneer, machine for scraping and toothing	Feb. 14, 1854	XIV.
	Goodrich, Seavey, & Co. (See Stafford.)			
10729	Goodwin, Lorenzo D	Water-wheels	April 4, 1854	XI.
10738	Goodyear, Charles	Gums, vulcanizable, treating	April 4, 1854	IV.
10689	Goodyear, E. D. S., assignor to New York India-rubber Company.	India-rubber, processes for treating	Mar. 28, 1854	IV.
11694	Goolman, William P., and Samuel Morris	Staging, portable	Sept. 19, 1854	IX.
	Gordon, Alexander, and J. A. H. Ellis. (See Ellis & Gordon.)			
	Gordon, Alexander, and J. A. H. Ellis. (See Ellis & Gordon.)			
11064	Gordon, George P	Printing-press	June 13, 1854	XVIII.
11370	Gore, Ezekiel	Butter workers	July 25, 1854	XVII.
11783	Gossen, Benjamin F	Chair, machinery, railroad	Oct. 10, 1854	IX.
11782	Gossin, Louis A	Sugar-making apparatus, construction of	Oct. 10, 1854	IV.
12096	Grader, George W., and Benjamin F. Cowan	Mills, grain	Dec. 19, 1854	XIII.
10044	Graham, Edmund H., assignor to E. Graham and Artemas Wheeler.	Guns, magazine	May 16, 1854	XIX.
11724	Graham, Wm., and L. McLaren	Car-seats, railroad	Sept. 26, 1854	X.
11770	Grant, John E., assignor to Cyrus Carpenter and A. D. Shaw.	Furnaces, hot-air	Oct. 3, 1854	V.
11455	Grant, Robert	Hydraulic press	Aug. 1, 1854	XI.

11785	Grant, Robert	Brakes for checking and starting cars	Oct. 10, 1854	IX.
11587	Graves, Benjamin F., assignor to Wm. C. Knowlton.	Boring recesses for casters, &c., tool for	Aug. 22, 1854	XIV.
12022	Gray, Joshua	Pump, rotary	Dec. 5, 1854	XI.
10571	Gray, Michael M	Chair, railroad, machines	Feb. 28, 1854	IX.
	Gray, S. H. (See D. W. Clark.)			
11582	Gray, Solomon S., assignor to S. S. Gray and S. A. Woods.	Planing lumber "out of wind," machine for	Aug. 22, 1854	XIV.
674	Gray, Wm. P., assignor to Cox, Hagar, & Cox	Stove, cooking	Oct. 17, 1854	Design.
11042	Green, Edwin J	Buggies, joint-bodied	June 6, 1854	X.
11063	Green, Ely H	Axle, carriage	June 13, 1854	X.
11890	Green, Jacob	Glass furnaces	Nov. 7, 1854	XV.
11297	Green, Joel	Sealing cans, apparatus for	July 11, 1854	XXII.
	Green, Parley G., and W. Shaw. (See Shaw & Green.)			
10657	Greene, Henry	Harvesters, grain and grass	Mar. 21, 1854; antedated Sept. 21, 1853.	I.
10391	Greene, J. Durell	Fire-arms, breech-loading	Jan. 3, 1854	XIX.
11157	Greene, J. Durell	Fire-arms, breech-loading	June 27, 1854; in England, May 12, 1854.	XIX.
11964	Greene, Samuel	Cards of carding engines, cleaning	Nov. 21, 1854	III.
	Greenhalgh, Wm., and H. Skinner. (See Skinner & Greenhalgh.)			
10916	Greenleaf, A	Water-wheel	May 16, 1854	XI.
11296	Greenleaf, A	Wheel, water, impact	July 11, 1854	XI.
10427	Greenough, John J	Boots and shoes, machines for pegging	Jan. 17, 1854	XVI.
269	Greenough, John J	Boots and shoes, machines for pegging	Jan. 17, 1854; reissued July 4, 1854.	Reissue.
11220	Greer, Thomas	Boilers, steam	July 4, 1854	VI.
	Greenwood & Co. (See Charles Zenner, assignor.)			
	Greenwood & Co. (See Charles Zenner, assignor.)			
10985	Gregg, Charles	Vises or chucks for holding cylindrical bodies	May 30, 1854	II.
11422	Gregg, Isaac	Brick presses	Aug. 1, 1854	XV.
11784	Griffith, John W	Ships, construction of	Oct. 10, 1854	VII.
10516	Griffiths, John	Valve cocks	Feb. 14, 1854	XI.
12112	Griffiths & Shields, assignors to Robert Griffiths	Horseshoes, machine for forging	Dec. 19, 1854	II.
	Grilley & Peck. (See —— Peck, assignor.)			
10435	Griswold, Geo. W	Amputating-apparatus	Jan. 17, 1854	XX.
11122	Griswold, Geo. W	Tool-handle	June 20, 1854	II.
11326	Griswold, Geo. W	Powder, impalpable, for paints, process of separating	July 18, 1854	IV.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11371	Griswold. Geo. W	Grates	July 25, 1854	V.
11646	Griswold, Geo. W	Door-fastener, portable	Sept. 5, 1854	II.
	Grover, Baker & Co	Sewing-machine	June 27, 1852; disclaimer entered Dec. 29, 1854.	Disclaimer.
11244	Guild, Chas. M.	Gas-heating apparatus	July 11, 1854	V.
	Guild & Harvie. (See Harvie & Guild.)			
10406	Gullett, Benj'n D	Gins, cotton	Jan. 10, 1854	III.
11891	Gumaer, Samuel	Corn-shellers	Nov. 7, 1854	I.
12097	Hadley, Stephen, jr.	Wheel, water, direct action	Dec. 19, 1854	XI.
	Hagar, Cox, & Cox. (See Wm. P. Gray, assignor.)			
12059	Hagar, E. L	Harrows	Dec. 12, 1854	I.
11222	Hague, John R	Hose, machines for punching rivet-holes in	July 4, 1854	XVI.
10457	Haight, Daniel, jr.	Wagons, attaching shafts to	Jan. 24, 1854	X.
10568	Hall, Abijah, and Sylvanus Sturtevant	Snow-plough for railroads	Feb. 28, 1854	X.
10456	Hall, Alexander	Piano-fortes	Jan. 24, 1854	XVIII.
10776	Hall, Alexander	Piano-forte actions	April 11, 1854	XVIII.
11723	Hall, Alexander	Clocks, electric	Sept. 26, 1854	VIII.
11373	Hall, B. T.	Wheel, water	July 25, 1854	XI.
10504	Hall, Elias	Tool-holder	Feb. 7, 1854	II.
11456	Hall, John S	Ploughs	Feb. 7, 1854	I.
10505	Hall, John S	Ploughs	Aug. 1, 1854	I.
11158	Hall, William	Locks, bank	June 27, 1854	II.
	Halladay, A., *et al.* (See —— Sizer, *et al.*)			
11629	Halladay, Daniel	Windmills, governor for	Aug. 29, 1854	XI.
10802	Hallenbeck, Martin	Harvesters, grass	April 18, 1854	I.
11725	Halsey, Moses E	Chair frames	Sept. 26, 1854	XVII.
10407	Halvorson, Halvor.	Boots and shoes, machines for pegging	Jan. 10, 1854	XVI.
11435	Halvorson, H., assignor to H. Halvorson and H. Barnes.	Cloth on looms, machanism for measuring	Aug. 1, 1854	III.
10849	Halvorson, Halvor, assignor to H. Halvorson and J. T. Heard.	Oil, rosin, processes for distilling	May 2, 1854	IV.

10850	Halvorson, Halvor, assignor to H. Halvorson and J. T. Heard.	Distilling apparatus	May 2, 1854	IV.
10365	Hamilton, James	Quartz-crushing machines	Jan. 3, 1854	II.
12023	Hammitt, John T	Car-seats, railroad	Dec. 5, 1854	X.
10918	Hammon, Heman B	Yokes, ox	May 16, 1854	I.
	Hauff & Kuhlershmidt. (See Kuhlershmidt & Hauff.)			
	Hanford, George S. & Co. (See J. Lieberman.)			
11727	Hardman, Thomas, and Albert Vose	Whiffletrees	Sept. 26, 1854	X.
11374	Harig, A. C., and D. C. Stoy.	Locks, bank	July 25, 1854	II.
275	Harig, A. C., and D. C. Stoy.	Locks, bank	July 25, 1854; re-issued Aug. 22, 1854.	Re-issue.
11669	Harley, J. L., and Samuel Maxwell	Ventilating ship timbers	Sept. 12, 1854	V.
10986	Harraday, John	Cloth, machine for cutting out	May 30, 1854; in England, January 20, 1854.	XXI.
11123	Harris, Charles S	Motion, producing continuous circular, from reciprocating rectilinear.	June 20, 1854	XIII.
619	Harris, C., and P. W. Zoiner	Stove, dining-room	Jan. 24, 1854	Design.
620	Harris, C., and P. W. Zoiner	Stove, cooking	Jan. 24, 1854	Design.
624	Harris, C., and P. W. Zoiner, ass'rs to Alex. Bradley.	Stove, cooking	Jan. 31, 1854	Design.
631	Harris, C., and P. W. Zoiner	Stoves, coal	Feb. 21, 1854	Design.
11934	Harris, Daniel, assignor to John P. Bowker, jr.	Sewing-machines	Nov. 14, 1854	III.
11065	Harris, F. M	Wagons, tail-boards of.	June 13, 1854	X.
11863	Harris, J., J. B. Stott, and G. Richmond	Rope and cordage, machinery for making	Oct. 31, 1854	III.
11524	Harris, Joseph, jr	Lamps	Aug. 15, 1854	V.
	Harris, L. W., & Montgomery. (See Montgomery & Harris.)			
11749	Harris, Thomas J., jr	Garments, fastenings for	Oct. 3, 1854	XXI.
11040	Harrison, Edward	Mills, grinding	June 6, 1854	XIII.
10763	Harrison, James, jr	Sewing-machines	April 11, 1854	III.
10690	Harrison, R. H., assignor to R. H. Harrison and J. J. Gallaher, jr.	Churns.	Mar. 28, 1854	I.
10739	Hart, Carmi	Veneers, machine for cutting	April 4, 1854	XIV.
	Hartshorn & Ames. (See Harrison Eaton, assignor.)			
11892	Hartshorn, Sheldon S	Buckles, manufacture of	Nov. 7, 1854	XVI.
11243	Hartson, George B	Wheels, wrought-iron car, making	July 11, 1854	X.
10447	Harvey, Charles R	Furnaces, air-heating	Jan. 24, 1854	V.
11584	Harvey, H. A., and Edward P. Cowles, administrators of Thomas W. Harvey, assignors to the Harvey Steel and Iron Company.	Furnaces for making wrought-iron directly from the ore.	Aug. 22, 1854	II.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10385	Harvey, Thomas W., assignor to John B. Terry	Pins, machine for sticking	Jan. 3, 1854	II.
10814	Harvie, A., and C. Guild	Vinous fermenting in close vessels	April 25, 1854	IV.
	Harwood, H. J., and Wm. Gates, jr. (See Gates & Harwood.)			
10635	Haskins, E. S	Clothes-lines, spring clasps for	Mar. 14, 1854	XVII.
10636	Hastings, Elbridge G	Stone, dressing, machines for	Mar. 14, 1854	XV.
11314	Hatcher, Jacob J	Pen and pencil case	July 11, 1854	XVIII.
11550	Hatcher, Wm. Z	Cocks, stop and waste	Aug. 22, 1854	XI.
11726	Hatfield, Aaron L	Numbers, machines for adding	Sept. 26, 1854	VIII.
11427	Hathaway, John M	Shot-pouches	Aug. 1, 1854	XIX.
657	Hattersley, Wm., and Charles Dickinson	Coffee-pot, design for tea or	July 4, 1854	Design.
	Hawes, Josiah J. (See Southworth & Hawes.)			
11748	Hawes, R. L	Cloth, drying	Oct. 3, 1854	III.
10670	Hawkes, Charles W	Printing-presses, nippers for	Mar. 21, 1854	XVIII.
	Haworth & Edmondson. (See Edmondson & Haworth.)			
	Haworth & Edmondson. (See Edmondson & Haworth.)			
11893	Hay, A. K	Glass furnaces	Nov. 7, 1854	XV.
11263	Hayden, Hiram W	Buttons, metallic, ornamenting	July 11, 1854	XXI.
10506	Hayden, J. B	Hubs, metallic	Feb. 7, 1854	X.
10962	Hayes, John P	Furnaces, hot-air	May 23, 1854	V.
11608	Hayward, Daniel	India-rubber, manufacture of	Aug. 29, 1854	IV.
10594	Heacock, Joel P	Barrel-heads, apparatus for rounding and bevelling	Mar. 7, 1854	XIV.
	Heard & Halvorson. (See Halvorson, assignor.)			
	Heard & Halvorson. (See Halvorson, assignor.)			
11375	Heath, Mark A	Windows	July 25, 1854	IX.
10740	Hedges, Stephen	Table and chair combined	April 4, 1854	XVII.
665	Heller, Francis, and Elias Young	Stoves, cooking	Aug. 15, 1854	Design.
10366	Helton, Michael W	Saw gates, method of hanging and operating	Jan. 3, 1854	XIV.
10452	Hench, Peter, W. S., and J. J	Mills for grinding sumac	Jan. 24, 1854	XIII.
11861	Heneage, Robert	Picker cylinder, tooth-clothing for	Oct. 31, 1854	III.

11124	Henry, John	Wheels, cast-iron car	June 20, 1854	X.
10572	Henson, Thomas D., and George Rohr	Planters, seed	Feb. 28, 1854	I.
11831	Herriet, Julius, assignor to John Gaylord Wells	Stereotype composition, gutta percha	Oct. 24, 1854	XVIII.
11551	Heywood, Levi, J. L. Ross, and James K. Otis	Bureaus, portable	Aug. 22, 1854	XVII.
11994	Hibbard, Elias A	Stove, rotary cooking	Nov. 28, 1854	V.
11223	Hibbard, Wm. C	Engines, steam, for regulating the motion of	July 4, 1854	VI.
11935	Hibbs, Jonathan	Ploughs	Nov. 14, 1854	I.
	Hickok, S. and Thomas. (See Thomas & Hickok.)			
	Hickok, W. O. (See S. V. Collins.)			
11224	Hidden, Enoch	Stands, reading and writing	July 4, 1854	XVIII.
10921	Higgins, George E	Ear-rings, fastenings for	May 16, 1854	XVIII.
11894	Higgins, Horace S	Barrel machinery	Nov. 7, 1854	XIV.
11159	Hill, Daniel	Planter, seed	June 27, 1854	I.
11807	Hill, E. A	Stove, smoke-consuming	Oct. 17, 1854	V.
11565	Hill, Joseph	Daguerreotype plate holder	Aug. 22, 1854	XVIII.
11147	Hill, Luther, assignor to L. Hill and L. Stratton	Boot-soles, machine for cutting out	June 20, 1854	XVI.
11010	Hill, Wm. W	Stove, rotary, arrangement of dampers in	June 6, 1854	V.
11647	Hinde, John	Flax and hemp, machines for breaking	Sept. 5, 1854	III.
10384	Hine, R. M., assignor to Silsby & Hine	Forks, hay and manure, shanks of	Jan. 3, 1854	I.
10598	Hinman, George C	Sash-sustainers	Mar. 7, 1854	II.
10428	Hitchcock, Daniel T	Pumps, diaphragm	Jan. 17, 1854	XI.
12060	Hoard, J. W	Anglers' combined float and sinker	Dec. 12, 1854	XXII.
10988	Hobson, Carmi	Stave-machine	May 30, 1854	XIV.
11728	Hochstrasser, Henry	Books, machine for paging	Sept. 26, 1854	XVIII.
10637	Hock, A.	Gilding or plating fibrous substances	Mar. 14, 1854; in France Dec. 15, 1852.	XVIII.
11609	Hockman, Samuel M	Planters, seed	Aug. 29, 1854	I.
10860	Hodgin, Robert	Straw-cutter	May 2, 1854	I.
10622	Hodgkins, Christopher, assignor to N. Hunt	Sewing machines	Mar. 7, 1854	III.
10879	Hodgkins, Christopher, assignor to N Hunt	Sewing-machines	May 9, 1854	III.
11936	Hodgkinson, George	Paging-machine	Nov. 14, 1854	XVIII.
10547	Holbrook, Samuel F	Cars, railroad, contrivances for protecting passengers in.	Feb. 21, 1854	X.
11995	Hollen, Joseph	Knitting-machines	Nov. 28, 1854	III.
281	Hollingsworth, Jehu	Smut-machines	April 22, 1851; reissued Oct. 10, 1854.	Reissue.
11403	Holly, B., assignor to Silsby, Race, & Holly	Mortising-machine	July 25, 1854	XIV.
10392	Holmes, James B	Washboards, machines for nailing	Jan. 3, 1854	XIV.
10544	Holmes, John B	Derricks	Feb. 21, 1854	XII.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
258	Holmes, Jonas, and Ephraim French	Roving, variegated, process of manufacturing	May 18, 1852; reissued Feb. 28, 1854.	Reissue.
10987	Holmes, Silas A.	Daguerreotypes, cameras for taking stereoscope or other.	May 30, 1854	XVIII.
	Homan, ——. (See Tiebe & Muhle, assignors.)			
10804	Hopkins, David A	Cars, railroad, ticket-box for	April 18, 1854	X.
11428	Hopkins, David A	Car, railroad, couplings	Aug. 1, 1854	X.
10910	Hopkins, Israel M.	Knitting-machines	May 16, 1854	III.
11786	Horsford, E. N.	Chlorine, compounds for neutralizing	Oct. 10, 1854	IV.
11808	Horton, D. W.	Shoemakers' edge-planes	Oct. 17, 1854	XVI.
	Horton & Co. (See John Jenkins, assignor.)			
10619	Hotchkin, Ashley	Gates, hanging	Mar. 7, 1854	IX.
11160	Hotchkiss, Julius	Suspender ends, manufacturing	June 27, 1854	XXI.
	Howard, R. L. (See W. F. Ketchum, assignor.)			
	Howard, R. L. (See Wm. F. Ketchum, assignor.)			
	Howarth & Marks. (See Marks & Howarth, assignors to Whiting.)			
11892	Howd, Samuel B., assignor to T. T. Davis, J. L. Leach, and R. F. Stevens.	Salt, apparatus for the manufacture of	Oct. 10, 1854	IV.
12098	Howe, Isaac B.	Metal bars, machines for straightening heavy	Dec. 19, 1854	II.
11862	Howe, John C.	Fire-arms	Oct. 31, 1854	XIX.
	Howe, Joseph N. (See Wm. Porter, assignor.)			
11054	Howe, Tyler	Bed-bottoms	June 13, 1854	XVII.
10534	Howell, John W.	Collars, horse, stuffing	Feb. 14, 1854	XVI.
11125	Howes, Frederick	Sails, top, extra yard to	June 20, 1854	VII.
10938	Howes, Peter S.	Irons, smoothing, self-heating	May 16, 1854	XVII.
11648	Hubbard, Moses G.	Plane-stocks, method of hanging	Sept. 5, 1854	XIV.
10548	Hughes, Amos P.	Dove-tailing, tool for	Feb. 21, 1854	XIV.
10923	Hughes, Bernard	Hammers, trip	May 16, 1854	II.
11067	Hughes, Bernard	Vices	June 13, 1854	II.
11553	Hughes, Bernard	Engines, actuating by bi-sulphuret of carbon	Aug. 22, 1854	VI

10927	Hults, James	Locks, gun	May 16, 1854	XIX.
270	Hults, James	Locks, gun	May 16, 1854; reissued July 4, 1854.	Reissue.
10730	Humiston, Willis	Candle-mould, apparatus	April 4, 1854	IV.
	Humphrey, Charles. (See W. E. Woodbridge, assignor.)			
11225	Humphrey, Fenton	Spike-machines	July 4, 1854	II.
11066	Hundley, Benjamin R	Bed-bottoms	June 13, 1854	XVII.
	Hunt, Nehemiah. (See O. G. Boynton.)			
	Hunt, N., and D. H. Chamberlain. (See D. H. Chamberlain, assignor.)			
	Hunt, N. (See Hodgkins, assignor.)			
	Hunt, N. (See Hodgkins, assignor.)			
	Hunt, N., and Wm. Kidder. (See Wm. Kidder, assignor.)			
	Hunt, Nehemiah. (See G. A. Leighton, assignor.)			
11262	Hunt, Samuel	Harness, apparatus for detaching, from horses	July 11, 1854	XVI.
11161	Hunt, Walter	Sewing-machine	June 27, 1854	III.
11376	Hunt, Walter	Shirt-collars	July 25, 1854	XXI.
11126	Huntington, Solomon F	Carriage-tops	June 20, 1854	X.
10803	Hurd, Julius C	Cotton and other fibrous substances, cleaning	April 18, 1854	III.
11610	Hurst, Abraham R	Manure-excavators	Aug. 29, 1854	I.
10590	Hussey, Isaac	Plastering, machines for	Mar. 7, 1854	IX.
11327	Huston, Felix	Vessels, mode of raising	July 18, 1854	VII.
10429	Hyatt, E. C., & C. Meyer	Boot and shoe soles of gutta-percha or India-rubber, manufacture of.	Jan. 17, 1854	XVI.
11695	Hyatt, Thaddeus	Vault lights	Sept. 19, 1854	IX.
11426	Hyde, Joseph	Washboards	Aug. 1, 1854	XVII.
11552	Hyde, J. Burrows	Telegraph-wires, apparatus for coating	Aug. 22, 1854	VIII.
11226	Ide, Samuel	Planter, seed	July 4, 1854	I.
11053	Iler, James, and William Fitzpatrick	Nail-plate feeders	June 13, 1854	II.
11227	Ingalls, Joshua K	Vault covers, catch for	July 4, 1854	IX.
10890	Ingersoll, Platt C	Pestle with the mortar, arrangement of	May 9, 1854	XX.
11787	Ingersoll, Simon	Drills, pawl	Oct. 10, 1854	II.
	Irvine & Merrill. (See ——— Merrill, assignor.)			
	Isett, E. B. (See Martin Bell.)			
11788	Jack, John	Saw gummer	Oct. 10, 1854	XIV.
12061	Jackman, Enoch	Carpets, securing to floors	Dec. 12, 1854	XVII.
11457	Jackson, Abraham	Horse-power hoisting machinery	Aug. 1, 1854	XIII.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11554	Jackson, George	Knitting machines	Aug. 22, 1854	III.
11377	Jackson, Henry	Boiler, steam	July 25, 1854	VI.
10569	Jackson, Timothy D	Dies for making seamless metal tubes	Feb. 28, 1854	II.
10963	Jacobs, Amos	Boilers, steam, apparatus for regulating the supply of feed-water to.	May 23, 1854	VI.
11331	Jaeger, William G. W	Lamp-black, manufacture of	July 18, 1854	IV.
11195	James, Henry B	Smut-machines	June 27, 1854	XIII.
11864	Jarnagin, Chesley	Wagons, seats for	Oct. 31, 1854	X.
11954	Jarosson, Leon	Printing-blocks, method of constructing	Nov. 14, 1854	XVIII.
10989	Jarrett, Thomas T	Hay elevators	May 30, 1854	I.
11833	Jenks, Barton H	Looms	Oct. 24, 1854	III.
12062	Jenkins, J., and J. R. Cooke	Hub-bands for carriages	Dec. 12, 1854	X.
11920	Jenkins, John, assignor to Roe, Horton, & Co	Jacks, carriage-lifting	Nov. 7, 1854	XII.
10453	Jennings, James H., and Thomas Brierly	Cloth, fulling, machinery for	Jan. 24, 1854	III.
11789	Jennings, Lyman	Cans for holding liquids	Oct. 10, 1854	XVI.
11566	Jinkins, Joseph C	Tuning forks	Aug. 22, 1854	XVIII.
10805	Johnson, Abram C	Cars, dumping, operating	April 18, 1854	X.
12063	Johnson, Edward C	Fliers	Dec. 12, 1854	III.
10473	Johnson, Eleazer W	Saw-mills	Jan. 31, 1854	XIV.
10575	Johnson, Frank G	Bank-notes, table to hold, when cut	Feb. 28, 1854	XVIII.
11162	Johnson, H M	Cultivator, rotary	June 27, 1854	I.
11482	Johnson, Josée	Brick-presses	Aug. 8, 1854	XV.
	Johnson, Joseph B., and —— Morey. (See Morey and Johnson.)			
	Johnson, Joseph H. (See John Yandell.)			
11127	Johnson, Nathan	Bricks, mode of moulding	June 20, 1854	XV.
11029	Johnson, Wm. B	Planter, seed	June 6, 1854	I.
10597	Johnson, Wm. H	Sewing-machines	Mar. 7, 1854	III.
10408	Johnston, James J	Irons, smoothing, heaters for	Jan. 10, 1854	XVII
11044	Johnston, James J., and J. V. Cunningham	Moulding hollow-ware	June 6, 1854	II.
10409	Johnston, John	Irons, smoothing, self-heating	Jan. 10, 1854	XVII.

11832	Johnston, Joseph	Bran-duster	Oct. 24, 1854; antedated April 24, 1854.	XIII.
11567	Jones, Abner W	Boilers, means for preventing the explosion of	Aug. 22, 1854	VI.
10826	Jones, G. C., and P. King	Wedge-machine	April 25, 1854	XIV
	Jones, Henry C. (See Stephen White and H. C. Jones.)			
	Jones, Orlando, administrator of Sam'l Blatchford	Starch, manufacture of	Mar. 12, 1841; disclaimer entered April 6, 1854; in England April 30, 1840.	Disclaimer.
10696	Jones, Richard	Zinc white, making	Mar. 28, 1854	IV.
10424	Jones, Thomas L., assignor, through Horace Dresser and self, to James B. Jones.	Paddle-wheels, feathering	Jan. 10, 1854	VII.
11068	Jones, William E	Saddle-trees	June 13, 1854	XVI.
11525	Judd, Albert H	Boilers, steam, safety apparatus for	Aug. 15, 1854	VI.
255	Judson, Junius and Alfred, assignors to Junius Judson	Valves for governors	Nov. 5, 1840; reissued Jan. 10, 1854.	Reissue.
10806	Keach, Lawson P	Oysters, &c., cooking	April 18, 1854	XVII.
11228	Keck, Philip H	Wash-boards	July 4, 1854	XVII.
10420	Kedzie, John	Filters	Jan. 10, 1854	XI.
11069	Keech, Jos., and Stephen Stillwell	Winnowing-machines	June 13, 1854	I.
11729	Keeler, J. F	Scales, platform	Sept. 26, 1854	XII.
	Kellar, W. C., and Thos. Murdock. (See Murdock and Kellar.)			
10807	Keller, George W	Fire-escape	April 18, 1854	XXII.
11196	Kelley, Alfred D	Cutters, heel	June 27, 1854; antedated March 20, 1854.	XVI.
10671	Kells, Philip H.	Harvesters	Mar. 21, 1854	I.
	Kelsey, John B. (See W. Bryent, assignor.)			
11649	Kendall, A	Riving machine	Sept. 5, 1854	XVI.
11965	Kendall, Adoniram	Shingle machine	Nov. 21, 1854	XIV.
11895	Kendall, Thomas	Bottle stoppers	Nov. 7, 1854	XXII.
11163	Kennedy, D. W	Drying cloth	June 27, 1854	V.
11295	Kennedy, James C	Oven, elevated	July 11, 1854	V.
	Kerosene Gas Co. (See Gesner, assignor, "A," "B," "C."			
10861	Ketchum, A. C	Car-trucks with adjustable axles	May 2, 1854	X.
10697	Ketchum, Seymour	Smut machines	Mar. 28, 1854	XIII.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
259	Ketchum, Wm. F	Harvesters, grass	Feb. 10, 1852; re-issued Feb 28, 1854.	Reissue.
11429	Ketchum, Wm. F	Paddle-wheels, submerged	Aug. 1, 1854	VII.
10841	Ketchum, Wm. F, assignor to R. L. Howard	Harvesters, guard-fingers of	April 25, 1854	I.
12113	Ketchum, Wm. F., assignor to R. L. Howard	Harvesters, grain and grass	Dec. 19, 1854	I.
11996	Kidd, Whitten E	Bonnet fronts, moulds for pressing	Nov. 28, 1854	XXI.
11542	Kidder, William, assignor to Wm. Kidder and N. Hunt.	Boots and shoes, machines for pegging	Aug. 15, 1854	XVI.
10651	Kimball, Alpheus	Sashes, window, securing	Mar. 14, 1854	II.
11750	Kimbel, John	Car, dumping	Oct. 3, 1854	X.
10596	Kimble, Henry B	Sash fasteners	Mar. 7, 1854	II.
11966	King, Jerome B	Kettles for calcining plaster of Paris	Nov. 21, 1854	IV.
11611	King, John H., jr	Planters, seed	Aug. 29, 1854	I.
	King, P., and J. C. Jones. (See Jones & King.)			
	Kinsley & Stevens. (See Stevens & Kinsley.)			
12024	Kittle, Samuel P	Switches, railroad	Dec. 5, 1854	IX.
11865	Kitson, Richard	Cotton and other fibrous substances, machinery for picking.	Oct. 31, 1854	III.
10508	Knecht, Reuben	Daguerreotype-plate holder	Feb. 7, 1854	XVIII.
11483	Knight, Daniel	Fire-arms	Aug. 8, 1854	XIX.
10518	Knowles, Jonathan	Process of treating vegetable fibre	Feb. 14, 1854; in France April 4, 1853.	IV.
	Knowlton, Wm. C. (See Benjamin T. Graves, assignor.)			
	Kolb & Vitally. (See Vitally & Kolb.)			
11077	Kownover, D. N., assignor to R. L. Kownover	Gates, canal, mode of closing wickets in	June 13, 1854	IX.
11866	Krider, John M	Tailors' measuring instrument	Oct. 31, 1854	XXI.
11049	Krupp, Alfred	Tires, making car and other wheel	June 6, 1854	II.
10828	Kuhlershmidt, W., and W. Hauff	Printing presses, apparatus for feeding paper to	April 25, 1854	XVIII.
10845	Lachenmaier, Mathias	Iron railing, strap, device in constructing	May 2, 1854	II.
679	Lachenmaier, Mathias	Fences, wire	Nov. 21, 1854	Design.
10917	Lackey, Leander	Boots and shoes, machines for pegging	May 16, 1854	XVI.

10750	Lafetra, Tyler W	Tobacco, machine for drying	April 4, 1854	XXII.
11229	Laird, Joseph F	Ore-stamping machines	July 4, 1854	II.
	Lamson, Nathaniel. (See Thos C. Ball, assignor.)			
11612	Landmann, C. R	Lamp fillers	Aug. 29, 1854	V.
11730	Landmann, Chas. R	Lamp, safety	Sept. 26, 1854	V.
11289	Lanergan, Andrew	Lanterns	July 11, 1854	V.
10811	Lapham, William, executor of Seneca Lapham, deceased.	Harvesters, maize	April 18, 1854	I.
10638	Larwill, J. B., and J. Cross	Faucets for measuring liquids	Mar. 14, 1854	XI.
	Lathrop & Tyler (See Tyler & Lathrop.)			
	Lathrop & Tyler. (See White, assignor.)			
11025	Latta, Alexander B	Steam generators	June 6, 1854	VI.
11165	Latta, Alexander B	Pump, hydro-pneumatic force	June 27, 1854	XI.
11075	Latourette, David L	Mills	June 13, 1854	XIII.
10722	Lavender, B. A., and Henry Lowe	Paper and other purposes, treating cane fibre for	April 4, 1854	III.
11378	Lavers, Wm. G	Fence posts, device for securing ends of wires in	July 25, 1854	II.
11731	Laville, John Baptiste	Hats and hat bodies, machinery for felting	Sept. 26, 1854; in France, Aug. 20, 1852.	III.
	Lawrence & Abbott. (See Allen & Stewart, assignors.)			
	Lawrence & Abbott. (See S. H. Sailor, assignor.)			
	Lawrence & Abbott. (See Smith *et al.*, assignors)			
10792	La Bau, Geo. W	Blinds, &c., cleaning, machine for	April 18, 1854	XIV.
11164	La Bau, Geo. W	Mitre machine	June 27, 1854	XIV.
10721	La Mothe, Bernard J	Cars, railroad	April 4, 1854	IX.
11809	La Mothe, Bernard J	Buildings, iron	Oct. 17, 1854	IX.
	Lea & Roth. (See Roth & Lea.)			
	Lea & Roth. (See Roth & Lea)			
	Lea & Roth. (See Roth & Lea.)			
	Lea, Joseph, and J. Augustus Roth. (See Roth and Lea.)			
11937	Leach, George T	Brakes, car, method of engaging and disengaging self-acting.	Nov. 14, 1854	X.
10474	Leach, Harry	Propellers	Jan. 31, 1854	VII.
	Leach, James S., and others. (See Samuel B. Howd.)			
10762	Leavitt, Charles, assignor to S. R. Cockrill	Cotton, machines for cleaning	April 11, 1854	III.
11379	Lechtenthaler, Griffith	Cultivator	July 25, 1854	I.
10948	Lee, Elon A	Piano-forte action	May 23, 1854	XVIII.
11967	Lee, George W	Planters, seed	Nov. 21, 1854	I.

Alphabetical List of Patents—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10716	Leeds, Joseph	Stoves, cooking	Mar. 28, 1854	V.
11230	Leeds, Joseph	Kilns, brick and lime, controlling draught in	July 4, 1854	XV.
11896	Leeds, Joseph	Furnaces for heating buildings	Nov. 7, 1854	V.
10942	Leeds, L. W., and R. M. Smith	Heaters, hydraulic	May 16, 1854	V.
11613	L'Hommedieu, Ezra	Dies for making augers	Aug. 29, 1854	II.
	Leibrandt & Warnick. (See John C. Smith.)			
	Leibrandt & Warnick. (See Sailor & Smith.)			
11284	Leighton, George A., assignor to N. Hunt	Sewing-machines	July 11, 1854	III.
11867	Lenher, Samuel	Siphon, attachment to,	Oct. 31, 1854	XI.
12099	Leonard, Wm. B	Dynamometer, registering	Dec. 19, 1854	VIII.
10625	Lesley, Oliver	Saw-set	Mar. 14, 1854	II.
11751	Leslie, James Y	Knitting-machines	Oct. 3, 1854	III.
10410	Lester, Ebenezer A	Metallic bodies, squeezing and compressing, machines for.	Jan. 10, 1854	II.
10599	Levan, George	Reeling-machines	Mar. 7, 1854	III.
10519	Levis, Samuel G	Paper, making thick	Feb. 14, 1854	III.
11555	Lewis, Abel F	Anchors or drags, floating	Aug. 22, 1854	VII.
	Lewis, T. S., and Moses C. Stiles. (See Moses C. Stiles.)			
12085	Lieberman, M. Jacob, subject of the Emperor of Russia, at present residing in New York, assignor to George S. Hanford & Co.	Cloths, &c., water proofing	Dec. 12, 1854	III.
10862	Liebrick, Conrad	Hasps, trunk-lock	May 2, 1854	II.
12025	Lilley, John	Fibre, machinery for separating the, from the woody portion of tropical plants.	Dec. 5, 1854; in England July 21, 1853.	III.
11864	Lillibridge, Warren and Charles	Tailors' measure	Oct. 31, 1854	XXI.
11197	Lindner, Edward	Gun, magazine, repeating, and needle	June 27, 1854	XIX.
11027	Lipman, Hymen L	Eyelet-machine	June 6, 1854	XXI.
11260	Lipman, Hymen L	Eyelet-machine	July 11, 1854	XXI.
11380	Lipman, H. L	Eyelet-machine	July 25, 1854	XXI.
10827	Little, George	Printing-presses, mode of operating the feed-tables of.	April 25, 1854	XVIII.

10937	Little, Isaac W	Yokes, ox	May 16, 1854	I.
11406	Little, Wm	Lubricating material	Aug. 1, 1854; in England July 14, 1853.	XII.
10448	Littlefield, Dennis G	Stoves	Jan. 24, 1854	V.
10680	Livermore, George W	Barrels, machinery for making	Mar. 21, 1854	XIV.
10749	Livermore, George W	Staves, machines for crozing the ends of	April 4, 1854; in England Aug. 31, 1853.	XIV.
	Livesey, Starkie. (See Thomas Cook, assignor.)			
11381	Livingston, N. B	Carriages, coupling for	July 25, 1854	X.
11128	Lloyd, Charles C	Gas-meters and regulators	June 20, 1854	IV.
	Loeschner & Spencer. (See Spencer & Loeschner.)			
10375	Longbotham, James H	Boards, bookbinders', drying	Jan. 3, 1854	XVIII.
10475	Longking, Thomas	Daguerreotype plates, apparatus for cleaning and buffing.	Jan. 31, 1854	XVIII.
11982	Loomis, Joseph G., Mary Ann Loomis, executrix and assignor to W. A. Gardner.	Forceps, surgical	Nov. 21, 1854	XX.
10847	Loomis, Mahlon	Teeth, artificial, plates for	May 2, 1854	XX.
11526	Lord, J. L	Grindstone frame	Aug. 15, 1854	XXII.
641	Lorton, Wm. B	Clock-cases, fronts of	April 25, 1854	Design.
10748	Loughborough Wm. S	Planes, bench, bit fastening for cast-iron	April 4, 1854	XIV.
10891	Loughridge, Wm	Boats and other vessels, method of unloading canal	May 9, 1854	VII.
11293	Loughridge, Wm	Boats, canal, arrangement of means for freeing from water.	July 11, 1854	VII.
12065	Lovecraft, John F	Sawing light lumber, feed-motion for	Dec. 12, 1854	XIV.
10600	Loveland, Samuel	Docks, dry, sectional	March 7, 1854: antedated Sept. 7, 1853.	IX.
	Lowe, H., & B. A. Lavender. (See Lavender & Lowe.)			
11294	Lowe, Wm	Valves, cut-off, of steam-engines, operating	July 11, 1854	VI.
11752	Lownds, Jacob J	Pen and pencil case	Oct. 3, 1854	XVIII.
10477	Lull, Harvey, assignor to H. Lull and Richard Porter.	Hinges, shutter	Jan. 31, 1854; antedated Jan. 2, 1854.	II.
10848	Lundfear, Mervin T	Musical instruments, reed boxes for	May 2, 1854	XVIII.
12064	Luttgens, H. A	Engines, steam, cut-off, regulators for	Dec. 12, 1854	VI.
11166	Lyeth, John McF	Coffins	June 27, 1854	XXII.
10576	Lyman, A. S	Engines, air	Feb. 28, 1854	XI.
264	Lynahon, Daniel	Boots, cutting	Oct. 18, 1853; reissued May 9, 1854.	Reissue.
11261	Lyon, Amos	Lightning-rods	July 11, 1854	VIII.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
	Lyons & Fondé. (See Fondé & Lyons.)			
11382	Lyon, John	Ploughs, ditching	July 25, 1854	I.
12066	Lyon, William, assignor to F. and G. Simpson, B. Dodd, and C. B. Merriman.	Sewing-machines	Dec. 12, 1854	III.
11762	Mabie, John	Pen and pencil case	Oct. 3, 1854	XVIII.
10655	Mcfarlane, J. G	Planters, seed	Mar. 14, 1854	I.
10752	Macgregor, James, jr	Coffee-pot	April 11, 1854	XVII.
11167	Mallerd, William	Gas-burners, regulator of	June 27, 1854	V.
11168	Mallerd, William	Gas-burners	June 27, 1854	V.
11148	Mallory, Levi W., assignor to William Morris	Omnibus registers	June 20, 1854	X.
10393	Malone, Samuel	Planters, corn	Jan. 3, 1854	I.
118.0	Manny, John H	Harvesters, grain and grass	Oct. 17, 1854; antedated June 15, 1854.	I.
11459	Mansfield, Martin H	Grain, cleaning, screens for hulling clover seed and	Aug. 1, 1854	I.
11431	Mansfield, Willis	Switch-tenders, house for	Aug. 1, 1854	IX.
10973	Mansure, John, assignor to Farr & Thompson	Bracelet-clasps	May 23, 1854	XVIII.
10892	Marchant, Horatio G	Manure and sand loader	May 9, 1854	I.
11897	Marcy, E. E	Gums, vulcanizing elastic	Nov. 7, 1854	IV.
	Marden & Flanders. (See Flanders & Marden.)			
113	Mardock, Thomas, and W. C. Kellar	Harness saddle-trees	Aug. 12, 1852; additional improvement August 1, 1854.	Additional improv't.
10611	Marks, David B	Legs, artificial	Mar. 7, 1854	XX.
10454	Marks, Joseph	Valves, piston, and steam-passages in cylindrical steam-chests.	Jan. 24, 1854	VI.
10701	Marks, Joseph, assignor to William Whiting	Brakes, car, machinery for operating	Mar. 28, 1854; in England, November 23, 1852.	X.
10702	Marks, Jos., and John Howarth, assignors to William Whiting.	Brakes, car, machinery for operating	Mar. 28, 1854	X.
12026	Markham, Leonard F	Books, machine for rounding the backs of	Dec. 5, 1854	XVIII.
10661	Marland, Obadiah	Safes, iron	Mar. 21, 1854	II.

12027	Marland, Obadiah	Paper-making machinery	Dec. 5, 1854; in England, September 28, 1854.	III.
12028	Marland, Obadiah	Paper-making machinery	Dec. 5, 1854; in England, September 28, 1854.	III.
11556	Marquis, Robert	Sashes, balancing and hoisting apparatus for	Aug. 22, 1854	IX.
11670	Marsh, Seymour N	Trusses	Sept. 12, 1854	XX.
10753	Marshall, Elbridge	Planters, seed	April 11, 1854	I.
11557	Marshall, Elbridge	Manure spreader	Aug. 22, 1854	I.
11968	Martin, Daniel B	Valves, slide, in steam-engines, packing	Nov. 21, 1854	VI.
11997	Martin, Daniel B	Boilers, steam	Nov. 28, 1854	VI.
	Martin, J. B., & Vanduzen. (See B. C. Vanduzen, assignor.)			
11129	Martin, John S	Brushes, painters'	June 20, 1854	XVI.
11291	Martin, Joseph T	Grapple for raising sunken vessels	July 11, 1854	VII.
11898	Martin, William Nelson	Coal-hods	Nov. 7, 1854	V.
11026	Martine, Charles F	Bedsteads, sofa	June 6, 1854	XVII.
10411	Matteson, Harry H	Cordage, flexible	Jan. 10, 1854	III.
	Matthew, David	Spark-arresters	Dec. 31, 1840; extended December 27, 1854.	Extension.
	Matthews, John, assignee of Thomas W. Gillett. (See Gillett, assignor.)			
11133	Matthewson, Nathan F	Watch-chain swivel	June 20, 1854	VIII.
10742	Mattson, Morris	Syringes, enema	April 4, 1854	XX.
11938	Maton, Francis	Fire-arms, breech-loading	Nov. 14, 1854	XIX.
	Maxwell, Samuel. (See Henry Fry, assignor.)			
11259	Mayer, Andrew	Stoves, gas	July 11, 1854	V.
11674	Mayer, Andrew	Gas burners, regulator for	Sept. 12, 1854	V.
11672	Maynard Gilbert	Corn-shellers	Sept. 12, 1854	I.
10492	McAdams, John and William	Ruling paper, machines for	Feb. 7, 1854	XVIII.
	McAlester, Jas. B., and Mansel and E. Blake. (See Mansel Blake, assignor.)			
10577	McBride, Wm	Bed-pins, machines for making	Feb. 28, 1854	XIV.
262	McCarthy, Fones	Gin, cotton	July 3, 1840; reissued April 18, 1854.	Reissue.
	McCarthy, Fones	Gin, cotton	July 3, 1840; reissued April 18, 1854; extended June 28, 1854.	Extension.
10478	McCarty, James	Tubes, rollers for scarfing the edges of skelps for lap, welded.	Jan. 31, 1854	II.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10747	McCarty, James	Tubes, wrought-iron, heating skelps for the manufacture of.	April 4, 1854	II.
11614	McCauley, John G	Harrows	Aug. 29, 1854	I.
11486	McClelland, James S	Buggies	Aug. 8, 1854	X.
	McComb, James J	Brakes, car, arrangement of bumpers for self-acting	Dec. 12, 1854	X.
11869	McConnell, James E	Axles, railroad car	Oct. 31, 1854	X.
11740	McConnell, Wm. P	Gas, illuminating, from wood, process for making	Sept. 26, 1854	IV.
11258	McCord, Wm	Horse power	July 11, 1854	XIII.
11004	McCormick, Samuel	Screw blanks, impressing the threads upon	June 6, 1854; in England March 22, 1853.	II.
	McCready, George W. (See Thos. W. Drayton, assignor.)			
11998	McDonald, Angus W	Locomotives, tanks and cisterns for supplying	Nov. 28, 1854	VI.
11131	McDougall, D. E	Burglars' alarm	June 20, 1854	XXII.
10421	McGaffey, I. W	Mortising chisels	Jan. 10, 1854	XIV.
11899	McGaffey, Ives W	Potato diggers	Nov. 7, 1854	I.
11169	McGowan, John H	Pump, double-acting force	June 27, 1854	XI.
11673	McGregor, James, jr	Stoves and ranges, cooking	Sept. 12, 1854	V.
10430	McInturff, Abraham	Meat, mincing, machines for	Jan. 17, 1854	XVII.
11900	McKeage, Barnet	Stoves, mode of sawing bolts for	Nov. 7, 1854	XIV.
10681	McKenna, Samuel	Punch, metal, portable	Mar. 21, 1854	II.
11282	McKinstry, Ann C. V., administratrix of Wm. McKinstry, deceased.	Saws, circular, adjustable bearings for	July 11, 1854	XIV.
	McLaren, L. (See Graham & McLaren)			
	McLaughlin, F., and H. Rock. (See Hugh Rock, assignor.)			
11130	McLaughlin, Thos. G	Brakes, radial arms for car	June 20, 1854	X.
11527	McLaughlin, Thos. G	Brakes, railroad car	Aug. 15, 1854	X.
11438	McLean, William S	Wheels, car, with independent flange and tread	Aug. 1, 1854	X.
10964	McMullen, John	Boilers, steam, mechanical means for preventing incrustation in.	May 23, 1854	VI.
11487	McMurtry, John	Bricks, machine for making	Aug. 8, 1854	XV.

11834	McNair, John G.	Carpets and rugs, manufacturing	Oct. 24, 1854	III.
11763	McRea, William C.	Bridge, draw, railroad, and switch telegraph	Oct. 3, 1854	IX.
	Mead, W. W. (See Thomas W. Brown, assignor.)			
	Mead, William C., and John W. Chittenden. (See Chittenden & Mead.)			
10783	Meldrum, Garret	Turning-lathe	April 18, 1854	XIV.
11170	Melendy, John	Fruit picker	June 27, 1854	I.
11463	Mellen, Dustin F., assignor to D. F. Mellen, J. F. Augustus, and S. A. Eaton.	Metals, machines for planing	Aug. 1, 1854	II.
11568	Mellen, Dustin F.	Sawing clap-boards, &c., machine for	Aug. 22, 1854	XIV.
11558	Mellish, Henry	Mills, grain	Aug. 22, 1854	XIII.
11790	Mendenhall, Stephen C.	Looms	Oct. 10, 1854	III.
11484	Meriwether, William H.	Bed bottoms, spring	Aug. 8, 1854	XVII.
10507	Merrell, Ansel, assignor to John M. Irvine and A. Merrell.	Spokes, machine for dressing	Feb. 7, 1854	XIV.
10431	Merrell, Loriston G.	Pill machines	Jan. 17, 1854	IV.
10412	Merrell, Wm. G.	Cutting ellipses, machine for	Jan. 10, 1854	XIV.
	Merriam, M. H., and W. W. Nichols, assignors to W. W. Nichols & Co.	Turning lathes, tool-rest for	Aug. 22, 1854	XIV.
11071	Merrick, J. Vaughan	Fans, exhaust	June 13, 1854	V.
12100	Merrill, Chas.	Sash fasteners	Dec. 19, 1854	II.
11485	Merrill, J., and Geo. Patten	Engines, marine, refrigerators for	Aug. 8, 1854	VI.
	Merrill, W. B., *et al.* (See Absterdam & Merrill.)			
11132	Merriman, Anson	Engines, steam, regulators	June 20, 1854	VI.
	Merriman, C. B., *et al.* (See William Lyon, assignor.)			
	Merriman, Julius E.	Sewing-birds	Feb. 7, 1854	XXII.
	Meshurul, Wm. R. (See D. H. Chamberlain, assignor.)			
11290	Mettam, Chas.	Houses, construction of iron	July 11, 1854	IX.
	Meyer, C, and E. C. Hyatt. (See Hyatt & Meyer.)			
10586	Meyer, L. O. P.	India rubber and other gums, vulcanizing	Feb. 28, 1854	IV.
10741	Meyer, L. O. P.	Gums, vulcanizable, treating caoutchouc and other	April 4, 1854	IV.
10652	Middlekauff, Daniel S.	Harvesters, grain	Mar. 14, 1854	I.
11671	Middleton, John W.	Water, elevating, for the purpose of, method of applying heat to dilate gases.	Sept. 12, 1854	XI.
11675	Middleton, John W.	Fluids, apparatus for distributing	Sept. 12, 1854	XI.
11697	Middleton, John W.	Hydraulic ram, tidal or current	Sept. 19, 1854	XI.
11505	Miggett, Peter	Looms, power, shuttle-guards for	Aug. 8, 1854	III.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10951	Miles, L. A	Pump, valve	May 23, 1854	XI.
10609	Miller, Charles	Sewing machines	Mar. 7, 1854	III.
10976	Miller, Christian B	Processes of galvanizing metal	May 30, 1854	IV.
11901	Miller, Elliot T	Bombs, shells, or grenades	Nov. 7, 1854	XIX.
11902	Miller, George	Leather-banding for machinery, manufacturing	Nov. 7, 1854	XVI.
10367	Miller, George D	Tuyeres	Jan. 3, 1854	II.
11940	Miller, Joseph	Car coupling, railroad	Nov. 14, 1854	X.
	Miller, H. A., and John Standish. (See John Standish, assignor)			
12030	Miller, Henry R	Corn, mill for shelling and grinding	Dec. 5, 1854	I.
10723	Miller, Rodney	Carriage tops	April 4, 1854	X.
284	Miller, Sylvanus	Rake to harvesting machines	July 15, 1851; reissued Nov. 21, 1854.	Reissue.
11172	Miller, William J	Brads, machines for cutting	June 27, 1854	II.
12029	Miller, W. H	Washstands	Dec. 5, 1854	XVII.
11488	Millet, Stanislaus	Bedstead sofa	Aug. 8, 1854	XVII.
10818	Milligan, William E	Car seats, railroad	April 25, 1854	X.
11489	Millington, N., and D. J. George	Squares, carpenters', machines for graduating	Aug. 8, 1854	XIV.
11171	Minthorn, Daniel	Tube, inhaling	June 27, 1854	XX.
10929	Mitchel, William H	Type, composing, machinery for	May 16, 1854	XVIII.
11490	Moffitt, Alexander	Carriage, spring body	Aug. 8, 1854	X.
11437	Monnin, Charles, and W. M. Booth	Lanterns, fastening	Aug. 1, 1854	V.
10549	Montgomery, Richard	Medal plates, corrugating	Feb. 21, 1854	II.
	Montgomery, R., and L. W. Harris	Mill for breaking and grinding bark	Aug. 12, 1840; extended Aug. 10, 1854.	Extension.
11070	Montgomery, William	Card-teeth machine	June 13, 1854	III.
11732	Moody, Paul	Brakes, car, connecting a series of	Sept. 26, 1854	X.
	Moore & Thompson. (See John Thompson and A. S. Moore.)			
10659	Moore, Daniel, assignor to George S. Cameron	Type, machines for rubbing	Mar. 21, 1854	XVIII.
11870	Moore, Daniel	Cartridges, for breech-loading fire-arms	Oct. 31, 1854	XIX.
11871	Moore, Daniel	Flask, powder, for breech-loading guns	Oct. 31, 1854	XIX.

11761	Moore, Spencer	Grain threshers and separators, the feeding-hoppers of.	Oct. 3, 1854	I.
11941	Moore, William	Winnowers, grain	Nov. 14, 1854	I.
	Morehead, D. C. (See Chas. T. P. Ware, assignor.)			
268	Morey, Chas., and Jos. B. Johnson, assignors to J. M. Singer and Edward Clark.	Sewing-machine	Feb. 6, 1849; reissued June 27, 1854.	Reissue.
	Morgan and Seymour. (See Platt, assignor.)			
11791	Morgan, Elijah	Shingle-machine	Oct. 10, 1854	XIV.
11632	Morley, P. A., assignor to Jas. Bright	Lanterns, glass	Aug. 29, 1854	V.
10676	Morris, David A	Boxes, anti-friction	Mar. 21, 1854	X.
11134	Morris, Edmund	Slate-frame	June 20, 1854	XVIII.
11903	Morris, Edmund	Slate-frame	Nov. 7, 1854	XXII.
11676	Morris, Ephraim	Weight of cargoes in vessels, apparatus for determining the.	Sept. 12, 1854	XII.
10479	Morris, John L. L	Hammers, steam	Jan. 31, 1854	II.
	Morris, Samuel. (See W. P. Goolman and S. Morris.)			
	Morris, S., *et al.* (See Richardson, Morris and Perry.)			
	Morris, S. J., and B. C. Perry. (See H. Richardson, *et al.*)			
	Morris, Wm. (See L. W. Mallory, assignor.)			
11939	Morris, Wm	Omnibus-registers	Nov. 14, 1854	X.
260	Morrison, Enoch R	Shingle-machine	Nov. 12, 1853; reissued March 7, 1854.	Reissue.
11430	Morrison, Wm. H., and M. W. E. Doran	Mortising-machine	Aug. 1, 1854	XIV.
11698	Morrison, Wm. H	Fire-arms	Sept. 19, 1854	XIX.
	Morse, Samuel F. B	Telegraph, magnetic	June 20, 1840; reissued January 15, 1846; reissued June 13, 1848; disclaimer entered May 23, 1854.	Disclaimer.
	Morse, S. F. B	Electro-magnetism, mode of communicating information by signals, by application of.	June 20, 1840; reissued January 15, 1846; reissued June 13, 1848; extended June 19, 1854.	Extension.
	Morse, S. F. B., assignor to Magnetic Telegraph Company.	Telegraph, magnetic	June 20, 1840; reissued January 15, 1846; reissued June 13, 1848; disclaimer entered June 14, 1854.	Disclaimer.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
	Morse, S. F. B., assignor to Maine Telegraph Company.	Telegraph, electro-magnetic	June 20, 1840; reissued January 15, 1846; reissued June 13, 1848; disclaimer entered April 20, 1854.	Disclaimer.
	Morse, S. F. B., assignor to trustees of the New York, Albany, and Buffalo Magnetic Telegraph Company.	Electro-magnetism, mode of communicating information by signals, by application of.	June 20, 1840; reissued January 15, 1846; reissued June 13, 1848; disclaimer entered June 20, 1854.	Disclaimer.
	Morse, S F. B., assignor to New York and New England Union Telegraph company.	Signals, electro-magnetic	June 20, 1840; reissued January 15, 1846; reissued June 13, 1848; disclaimer entered March 17, 1854.	Disclaimer.
	Morse, S. F. B., assignor to A. Vail	Electro-magnetism, mode of communicating information by signals, by application of.	June 20, 1840; reissued January 15, 1846; reissued June 13, 1848; disclaimer entered June 19, 1854.	Disclaimer.
	Morse, B. G. (See W. Bullock, assignor.)			
11650	Morse, Josephine	Wheels, driving, of locomotives for ascending inclined planes.	Sept. 5, 1854	X.
10672	Mott, Jordan L.	Wheels, railroad-car	Mar. 21, 1854	X.
11041	Mott, Jordan L.	Wheels, car, upon axles, securing	June 6, 1854	X.
11383	Mott, Jordan L.	Staples to walls, mode of securing	July 25, 1854	XXII.
11999	Mott, Jordan L.	Stoves	Nov. 28, 1854	V.
	Mott, Jordan L.	Caldron, combined, and furnace for the use of agriculturists and others, mode of constructing a.	Dec. 1, 1840; extended November 20, 1854.	Extension.
10704	Mott, Richard D.	Stereotype pans	Mar. 28, 1854	XVIII.
	Mould & Reed. (See Reed & Mould.)			
	Muhle, ——. (See Liebe & Muhle.)			

10377	Muller, Charles	Type, casting, machines for	Jan. 3, 1854	XVIII.
666	Muller, Nicholas	Clock-cases, fronts of	Aug. 29, 1854	Design.
11231	Muntz, William Henry	Paddle-wheels	July 4, 1854	VII.
11330	Murdock, Ebenezer	Tobacco, cutting	July 18, 1854	XXII.
10977	Murphey, John	Gutta percha, processes for treating	May 30, 1854	IV.
	Murphy, John. (See William E. Rider.)			
11076	Murray, Bronson, assignor to T. R. Spencer, assignor to J. S. Wright.	Harvester, cutters	June 13, 1854	I.
11699	Myer, Henry B	Car-seats, mode of converting the backs of, into beds or lounges.	Sept. 19, 1854	X.
11942	Myers, Alpheus, M. D	Trap, tape-worm	Nov. 14, 1854	XX.
11943	Myers, Alpheus, M. D	Tape-worm operation	Nov. 14, 1854	XX.
11528	Myers, Jacob	Harrows	Aug. 15, 1854	I.
12101	Myers, James, jr	Sugar moulds, making	Dec. 19, 1854	IV.
10965	Myers, John, and R. G. Eunson	Sawing thin boards, &c., machine for	May 23, 1854	XIV.
11696	Napier, James R., and Wm. J. M. Rankine	Engines, air	Sept. 19, 1854; in England June 9, 1853.	XI.
10383	Nason, Joseph	Screws in lathes, arrangement in cutting	Jan. 3, 1854	II.
11135	Needham, Orwell H	Pump, breast	June 20, 1854	XX.
10449	Neilson, George	Ventilating railroad cars	Jan. 24, 1854	V.
10990	Neilson, George	Ventilating window to railroad cars	May 30, 1854	V.
11529	Neisch, Robert	Kilns, lime	Aug. 15, 1854	XV.
	Nelson, Joseph P., *et al.* (See Stephen Woodward, assignor.)			
11969	Nelson Richard L	Life-preservers to vests, mode of attaching	Nov. 21, 1854	VII.
10743	Nesmith, John	Wire-netting, machines for making	April 4, 1854	II.
	Newark Patent Hosiery Company. (See H. Burt, assignor.)			
	Newark Patent Hosiery Company. (See H. Burt, assignor.)			
	New Haven Iron Railing Company. (See Levi Van Hoesen, assignor.)			
12000	Newman, James	Tubes, making metal rods and	Nov. 28, 1854; in England March 23, 1854.	II.
10551	Newman, M., N. C. Whitcomb, and G. C. Cole	Whiffletree-hooks	Feb. 21, 1854	X.
11074	Newman, M., 2d, N. C. Whitcomb, and G. C. Cole	Coupling	June 13, 1854	X.
115	Newman, Martin, 2d, N. C. Whitcomb, and G. C. Cole.	Whiffletree-hooks	Feb. 21, 1854; additional improvem't Oct. 31, 1854.	Add'l imp't.
10950	Newton, Abner N	Fire-arms, primer for	May 23, 1854	XIX.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11198	Newton, Abner N.	Fire-arms, breech-loading	June 27, 1854	XIX.
11700	Newton, Abner N	Fire-arms, breech-loading	Sept. 19, 1854	XIX.
	Newton & Burrage. (See J. Burrage, assignor)			
10626	Newton, O., and J. A. Crever	Dust, excluding, from railroad cars	Mar. 14, 1854	V.
11384	Nichols, James R.	Fountain soda-water	July 25, 1854	XXII.
11615	Nichols, John B.	Binding folder	Aug. 29, 1854	III.
10724	Nichols, Oldin	Cable, chain, stopper	April 4, 1854	VII.
10725	Nichols, Oldin	Cable, chain, stopper	April 4, 1854	VII.
111	Nichols, Oldin	Mills, grinding	Oct. 12, 1852; additional improvem't May 30, 1854.	Add'l imp't.
	Nichols, W. W., and Co. (See Merriam and Nichols, assignors.)			
10673	Nicholson, Ambrose	Hinges, shutter, self-fastening	Mar. 21, 1854	II.
10396	Nicholson, Henry C., and James Spratt	Cans, preserve, sealing	Jan. 3, 1854	XVII.
11491	Nicholson, Samuel	Pavements, wooden	Aug. 8, 1854	IX.
11199	Noble, James	Cotton, and other fibrous materials, combing	June 27, 1854	III.
10705	Norcross, Nicholas G.	Sawing lumber, feed-motion for	Mar. 28, 1854	XIV.
10844	Norcross, Nicholas G.	Tonguing and grooving lumber, certain devices for	May 2, 1854	XIV.
10876	Norfolk, E. L.	Flax, machinery for dressing	May 9, 1854	III.
11944	Normand, C. B.	Saw-mills, mode of controlling and guiding logs in, without a carriage.	Nov. 14, 1854; in England Oct. 27, 1852; in France Nov. 5, 1852.	XIV.
11945	Normand, C. B.	Saws for mills, method of hanging	Nov. 14, 1854	XIV.
11946	Normand, C. B.	Sawing, curved and bevel, method of controlling the log for.	Nov. 14, 1854; in England Oct. 27, 1852; in France Nov. 5, 1852.	XIV.
11733	Norris, Septimus	Engines, locomotive, running gear of	Sept. 26, 1854	X.
11677	North, Newell	Spoke machines	Sept. 12, 1854	XIV.
	North, *et al.* (See Allen & Stewart, assignors.)			
	North, *et al.* (See S. W. Gibbs, assignor.)			
11508	Norton, John	Blasting rock, timber, &c.	Aug. 8, 1854	IX.
11904	Norton, Marcus P.	Brakes, railroad car	Nov. 7, 1854	X.

	Noyes, Chas. W., and Thos. W. Allen. (See Thos. W. Allen.)			
11970	Nutting, Mighill	Pencils for drawing machines, arrangement of	Nov. 21, 1854	XVIII.
10751	Ogden, John C., assignor to Charles S. Ogden	Chairs, railroad, making	April 4, 1854	IX.
10373	Ogden, Zina, assignor to Lewis C. Ogden	Carriage-tops, lowering, raising, and fastening	Jan. 3, 1854	X.
12067	Olds, Henry H.	Vessels, propulsion of	Dec. 12, 1854	VII.
11792	Oliver, Richard	Garments, fastenings for	Oct. 10, 1854	XXI.
11678	Osborn, William E	Cannon, breech-loading	Sept. 12, 1854	XIX.
11136	Osborne, James P	Turning casks, &c., from solid pieces, method of	June 20, 1854	XIV.
	Otis, Ross & Heywood. (See Levi Heywood, *et al.*)			
11292	Outcalt, Henry	Roofing, metallic, mode of constructing	July 11, 1854	IX.
10627	Overend, Andrew	Printing-paper, machine for damping	Mar. 14, 1854	XVIII.
11072	Overend, Andrew	Printers' friskets	June 13, 1854	XVIII.
10458	Overend, Wm.	Paper, wetting	Jan. 24, 1854	XVIII.
10556	Packard, Charles F.	Lathes, machines for cutting	Feb. 21, 1854	XIV.
11257	Packard, Charles F.	Sawing-machine	July 11, 1854	XIV.
10480	Page, Charles G.	Electro-magnetic engines	Jan. 31, 1854; in England May 3, 1851.	VIII.
10510	Page, Clark D.	Kilns, lime	Feb. 7, 1854	XV.
10394	Page, George F.	Saw-mills, ratchet-catch for head-blocks in	Jan. 3, 1854	XIV.
10368	Page, Lucius	Screw-bolts and nuts	Jan. 3, 1854	II.
10863	Pagett, Washington F.	Harrows	May 2, 1854	I.
11872	Palen, Vincent	Piles, mechanism for sawing off, under water	Oct. 31, 1854	IX.
11002	Palm, Joseph Baron de	Kilns, brick and pottery	June 6, 1854; in England July 13, 1852.	XV.
10459	Palmer, Aaron, and S. G. Williams	Harvesters, grain	Jan. 24, 1854	I.
10481	Palmer, William	Gauges, water, for steam boilers	Jan. 31, 1854	VI.
11759	Palmer, William	Cars, railroad, apparatus for starting	Oct. 3, 1854	IX.
11439	Palmer, William M	Threshing-machine	Aug. 1, 1854	I.
11051	Palmer, William Russell	Threshers	June 13, 1854; in England April 11, 1853.	I.
11328	Palmer, William Russell	Horse-powers	July 18, 1854; in England April 11, 1853.	XIII.
11835	Palmié, G. F., and A. H.	Fire-arms	Oct. 24, 1854	XIX.
11971	Parham, Charles	Sewing machines	Nov. 21, 1854	III.
11137	Parker, Charles	Vises, cast-iron	June 20, 1854	II.
	Parker, George, and W. A. Shaw. (See Shaw & Parker.)			
10757	Parker, Samuel J.	Sewing-machines	April 11, 1854	III.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
	Parker, Samuel J. (See William H. Akins, assignor.)			
	Parrott, William P., and J. Amory. (See Amory & Parrott.)			
11530	Patrick, Andrew	Cars, unloading coal and other	Aug. 15, 1854	X.
10864	Patton, G. M.	Dies, spring, arrangement of, in machines for making clinch-rings.	May 2, 1854	II.
	Patton & Merrill. (See Merrill & Patton.)			
667	Paul, Amos	Stoves, cooking	Aug. 29, 1854	Design.
	Paul, Mifflin. (See Thomas Worrall, assignor.)			
11760	Paul, Zachariah M.	Brick-machine	Oct. 3, 1854	XV.
11200	Pearsall, Thomas	Barrels, ventilated flour	June 27, 1854	XIV.
11850	Pearson, Mark R., assignor to M. R. Pearson and Samuel Shaw.	Mule, self-acting, roller-catch for	Oct. 24, 1854	III.
10744	Pease, Abiel	Drill for metal drilling	April 4, 1854	II.
11559	Pease, Julius A.	Pump, diaphragm	Aug. 22, 1854	XI.
11947	Pease, Julius A.	India-rubber over-shoes	Nov. 14, 1854	IV.
11174	Peavey, T. H.	Fire-arms, charger for	June 27, 1854	XIX.
10930	Peck, Jeremiah, assignor to J. Peck and C. F. Grilley.	Fire-arms	May 16, 1854	XIX.
11758	Peck, Samuel	Daguerreotype cases, manufacture of	Oct. 3, 1854	XVIII.
	Pendleton & Whittal. (See Whittal & Pendleton.)			
10639	Penfield, Eldridge H.	Grummets for sails, metallic	Mar. 14, 1854	VII.
12068	Penfield, Eldridge H.	Dock-holders for horses	Dec. 12, 1851	XXII.
285	Pennock, M. & S.	Planters, seed	Mar. 12, 1841; reissued Oct. 3, 1849; reissued Dec. 9, 1854.	Reissue.
11173	Penrose, Thomas	Scraper and spreader, road	June 27, 1854	IX.
12046	Pepper, Jno., jr., assignor to "The Franklin Mills."	Knitting machines	Dec. 5, 1854	III.
11081	Perkes, Samuel	Quartz and minerals, crushing and grinding	June 13, 1854; in England Oct. 12, 1852.	II.
11837	Perkins, E. L.	Paper, machinery for polishing	Oct. 24, 1854	III.

12087	Perkins, Joseph, assignor to Perkins & Upton	Yards, trussing, to vessels' masts	Dec. 12, 1854	VII.
11079	Perley, Chas	Rails, adjustable, for replacing cars on the track	June 13, 1854	IX.
11080	Perley, Chas	Cable, chain, stopper	June 13, 1854	VII.
12001	Perry, A. D	Fire-arms, breech-loading	Nov. 28, 1854; in England June 3, 1854.	XIX.
	Perry, B. C. (See Richardson, Morris, & Perry.)			
12069	Perry, James	Gold collector	Dec. 12, 1854	II.
11972	Perry, William	Spinning frames	Nov. 21, 1854	III.
	Peterson *et al.* (See Allen & Stewart.)			
	Peterson *et al.* (See Allen & Stewart.)			
	Peterson *et al.* (See Beesley & Delaney.)			
	Peterson *et al.* (See Beesley & Delaney.)			
	Peterson *et al.* (See Joseph Stewart.)			
11441	Petsch, Alexander H	Car, dumping	Aug. 1, 1854	X.
10653	Pettes, Simon	Stone, drilling-machines for	Mar. 14, 1854	XV.
	Pettit & Boggett. (See Boggett & Pettit.)			
11679	Phares, Joseph	Tailors' shears	Sept. 12, 1854	XXI.
11028	Phelps, Elijah	Excavators	June 6, 1854	IX.
10640	Phelps, E. C	Cock-stop	Mar. 14, 1854	XI.
11905	Phillips, Dewey	Gate, farm	Nov. 7, 1854	IX.
10593	Phillips, Wm. G	Gates, method of opening and closing	Mar. 7, 1854	IX.
11836	Phineas, Myer	Pen-holder	Oct. 24, 1854	XVIII.
	Phoebus & Anthony. (See Anthony & Phoebus.)			
11175	Pier, Oliver	Trap, for animals	June 27, 1854	XXII.
11440	Pierce, B. S., and C. M	Tubes, cement or earthen, moulds for	Aug. 1, 1854	XV.
10414	Pierce, David	Gold-separator	Jan. 10, 1854	II.
10991	Pierce, John R	Yokes, neck	May 30, 1854	I.
10413	Pierce, Henry E	Matches, machine for matting the ends of blocks in making.	Jan. 10, 1854	XXII.
	Pierce, H. W., *et al.* (See M. J. Wheeler, *et al.*)			
	Pierce & Roberts. (See Milton Roberts, assignor.)			
10966	Pigot, James	Palliasses, apparatus for making	May 23, 1854	XVII.
11256	Pine, Robt. G	Metals, plating	July 11, 1854	II.
11701	Pitman, Isaac	Lamps, rozin-oil	Sept. 19, 1854	V.
10578	Pitts, James	Cotton-picker cylinder	Feb. 28, 1854	III.
11232	Pitts, John A	Horse-powers	July 4, 1854	XIII.
	Pitts & Taggart. (See Jno. Taggart.)			
11176	Platt, L. L., and A. L	Buttons, wooden, in the manufacture of	June 27, 1854	XXI.
265	Platt, Nelson, assignor to W. H. Seymour and D. S. Morgan.	Harvesters	June 12, 1849; reissued May 23, 1854.	Reissue.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11177	Plumb, Hiram, and Simon H	Mortising machine	June 27, 1854	XIV.
12031	Plumb, Wm. Henry	Ores, machines for crushing	Dec. 5, 1854	II.
	Poindexter, Wm. H., administrator of J. R. Remington. (See J. R. Remington.)			
10610	Polley, Clark	Rams, hydraulic, method of operating	Mar. 7, 1854	XI.
10482	Pomeroy, Ebenezer G	Iron, sheet, manufacture of	Jan. 31, 1854	II.
10992	Poole, Daniel	Quartz-crushers	May 30, 1854	II.
11492	Porter, Chas. T	Stone-dressing machines	Aug. 8, 1854	XV.
	Porter, Richard, and H. Lull. (See Harvey Lull, assignor.)			
10559	Porter, Rufus, assignor to Geo. Stephenson	Cordage, machinery for making	Feb. 21, 1854	III.
11271	Porter, Rufus	Chair, cane	July 11, 1854	XVII.
11560	Porter, Wm. D	Gas-generators, wood	Aug. 22, 1854	IV.
11849	Porter, Wm., assignor to Joseph N. Howe	Lanterns, securing lamps to	Oct. 24, 1854	V.
	Potter, Lewis. (See Isaac De Zouche, assignor.)			
11082	Potter, Merritt F	Odometers, railroad	June 13, 1854	VIII.
11651	Powell, Thomas M	Freezers, ice-cream	Sept. 5, 1854	XVII.
12114	Pratt, Elisha, assignor to E. Pratt and H. P. Upton	Leather splitting machines	Dec. 19, 1854	XVI.
11009	Pratt, Jared	Tubes, making seamless metal	June 6, 1854	II.
	Pratt, W. F., *et al.* (See D. Wilson, assignor.)			
11793	Prescott, Emerson	Horn, &c., machines for splitting	Oct. 10, 1854	XXII.
10893	Prescott, Jonathan and George W	Slivers, machine for reducing wood to	May 9, 1854	XIV.
10522	Preston, Robert	Cloth, drying	Feb. 14, 1854	III.
11056	Prew, David	Wheels, cast-iron car	June 13, 1854	X.
11083	Price, Ebenezer N	Bits, bridle	June 13, 1854	XVI.
11008	Price, Whitman	Cultivator	June 6, 1854	I.
11616	Price, Whitman	Ploughs for planting potatoes	Aug. 29, 1854	I.
10378	Price, William H	Bedstead fastenings	Jan. 3, 1854	XVII.
676	Prince, Nathaniel S., assignor to F. Muzzy and Co., and A. Lombard.	Franklin fire-places	Oct. 31, 1854; antedated September 10, 1854.	Design.
10829	Prindle, Daniel R	Fence, field	April 25, 1854	IX.

10450	Prosser, Thomas	Metallic plates, manufacture of hollow slabs and flanged.	Jan. 24, 1854	II.
10911	Putnam, Joseph	Pipe-couplings, moulding clay	May 16, 1854	XV.
11757	Putnam, Silas S	Curtain fixtures	Oct. 3, 1854	XVII.
11385	Quantin, Alphonse	Bottles, mineral-water, stopping	July 25, 1854	XXII.
11272	Rabbeth, J	Pins, diaper	July 11, 1854	XXI.
	Race, *et al.* (See B. Holly, assignor.)			
11386	Race, W., assignor to H. C. Silsby and W. Race	Stove regulators	July 25, 1854	V.
10865	Ramsay, Wm. B. and G. M.	Harrows, flexible	May 2, 1854	I.
272	Randall, Charles	Planters, seed	Nov. 2, 1852; reissued July 25, 1854.	Reissue.
11756	Rankin, Andrew	Hat bodies, making	Oct. 3, 1854	III.
11255	Rankin, David	Wheels, flutter, buckets of, applying water to cuniformed.	July 11, 1854	XI.
277	Rankin, David	Wheels, flutter, method of applying water to compound buckets of.	July 11, 1854; reissued Sept. 26, 1854.	Reissue.
	Rankine, Wm. J. M. (See J. R. Napier and W. J. M. Rankine.)			
11000	Rauch, A. R.	Bottles, machines for washing	June 6, 1854	XXII.
11839	Rauch, John H.	Pen and pencil case, sliding	Oct. 24, 1854	XVIII.
10993	Ray, Elias M.	Knitting machines	May 30, 1854	III.
10784	Ray, Fowler M.	Cars, railroad, spiral springs for	April 18, 1854	X.
10907	Read, Charles A	Irons, smoothing, self-heating	May 16, 1854	XVII.
	Read, J. A., *et al.* (See Smith, Brown & Read.)			
11617	Redick, William	Planters, seed	Aug. 29, 1854	I.
11494	Reed, C., and B. K. Mould	Ventilating railroad cars	Aug. 8, 1854	V.
11139	Reed, Jesse	Ships' capstan and windlass, arrangement of	June 20, 1854	VII.
	Reed, J. M. (See —— Davis, assignor.)			
11045	Reed, John C., assignor to C. P. Buckingham, H. P. Upton, and J. C. Read.	Mills, grinding	June 6, 1854	XIII.
10460	Reese, Jacob	Rolling axles and shafts	Jan. 24, 1854	II.
10493	Reese, Jacob	Nuts, machines for making	Feb. 7, 1854	II.
10524	Reese, Jacob	Rolling, iron, machinery, hanging the fore-plate to	Feb. 14, 1854	II.
12047	Regester, Joshua, assignor to Clampit & Regester	Lubricating apparatus	Dec. 5, 1854	XII.
11493	Reif, Christian	Separators, clover	Aug. 8, 1854	I.
11138	Reimer, Benj. F.	Brakes in railroad cars	June 20, 1854	X.
10896	Reinert, Wm. S.	Butter, machine for weighing and printing	May 9, 1854	XVII.
11237	Remington, John R., deceased. (See Wm. H. Poindexter, administrator of John R. Remington.)	Cement compounds	July 4, 1854	IV.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10574	Renton, James	Zinc white furnaces	Feb. 28, 1854	IV.
11838	Renton, James	Iron, making wrought, direct from the ore	Oct. 24, 1854	II.
615	Resor, William, assignor to W. & R. P. Resor & Co.	Stove, hall	Jan. 3, 1854	Design.
623	Resor, William, assignor to W. & R. P. Resor & Co.	Stove, cannon	Jan. 31, 1854	Design.
618	Resor, William	Stove, laundry	Jan. 13, 1854	Design.
669	Resor, William	Stoves, Franklin	Oct. 17, 1854	Design.
673	Resor, William	Stoves, Franklin	Oct. 3, 1854	Design.
11201	Revercomb, Jacob	Ploughs	June 27, 1854	I.
12102	Reynolds, George	Tanning, compositions for	Dec. 19, 1854	XVI.
11086	Reynolds, Ira	Harvesters	June 13, 1854	I.
11533	Reynolds, O. L.	Forms, irregular, machine for cutting	Aug. 15, 1854	XIV.
12013	Richards, Henry, and Charles F. Winsor	Windlasses	Nov. 28, 1854	XII.
11561	Richardson, H., S Morris, jr., and B. C. Perry	Umbrellas, folding	Aug. 22, 1854	XXI.
11820	Richardson, John	Pen and pencil case	Oct. 17, 1854	XVIII.
11840	Richardson, John	Pen and pencil cases	Oct. 24, 1854	XVIII.
11873	Richardson, John	Pen and pencil case	Oct. 31 1854	XVIII.
646	Richardson, N. P.	Stoves, cooking	Dec. 12, 1854	Design.
652	Richardson, Nathaniel P.	Stoves, cooking	May 2, 1854	Design.
	Richardson, S., and Fairchild. (See Fairchild & Richardson.)			
656	Richmond, Apollos, assignor to A. C. Barstow & Co.	Stoves, cooking	June 13, 1854	Design.
	Richmond, G. (See J. Harris, *et al.*)			
11906	Rider, William E., and John Murphy	Gutta-percha and like gums, desulphurizing	Nov. 7, 1854	IV.
11387	Ring, Elihu	Butter-workers	July 25, 1854	XVII.
10641	Ripley, Ezra	Faucet	Mar. 14, 1854	XI.
[illegible]	Ripley, Seaman C.	Brick-machines	Mar. 7, 1854	XV.
	(See James F. Brodhead.)			
		Plough, ditching, and excavator	Nov. 14, 1854	I.
		Stoves	Nov. 28, 1854	Design.
			May 16, 1854	I

10726	Roberts, Elijah	Water-wheels, gates for	April 4, 1854		XI.
12115	Roberts, Milton, assignor to Roberts & Pierce	Turning prismatic forms, machine for	Dec. 19, 1854		XIV.
12015	Robertson, Thomas J. W., assignor to T. J. W. Robertson and N. E. Beach.	Sewing-machines	Nov. 28, 1854		III.
11754	Robertson, William H	Stone, machines for dressing	Oct. 3, 1854		XV.
11532	Robie, Jacob C	Table, turn	Aug. 15, 1854,		IX.
10455	Robinson, James	Grain, threshers and cleaners of	Jan. 24, 1854		I.
10628	Robinson, Jos. W	Scythes, form of	Mar. 14, 1854		I.
11140	Robinson, S. B	Drying grain	June 20, 1854		V.
10523	Robinson, Warren	Ventilator, ship's	Feb. 14, 1854		V.
10866	Robinson, William, jr	Rope, machinery for making	May 2, 1854		III.
645	Rock, Hugh, assignor to H. Rock and F. McLaughlin.	Hair-brushes, frames and handles of	May 2, 1854	Design.	
12070	Roe, Henry A	Cheese-vats	Dec. 12, 1854		I.
	Roe, Horton, & Co. (See John Jenkins, assignor.)				
11973	Roebling, John A	Wire rope, manufacturing	Nov. 21, 1854		II.
12032	Roebling, John A	Boilers, steam	Dec. 5, 1854		VI.
11907	Roff, Erastus W	Tenons on blind slats, machine for cutting	Nov. 7, 1854		XIV.
11562	Rogers, Artemas	Door-knobs, instrument for manufacturing	Aug. 22, 1854		II.
10706	Rogers, David B	Cultivators' teeth, machines for forming	Mar. 28, 1854		I.
10914	Rogers, George	Metals, baths for coating, with other metals	May 16, 1854		II.
	Rogers, G. W., *et al.* (See M. J. Wheeler, *et al*)				
10895	Rogers, James	Sash, machine for marking out	Mar. 9, 1854		XIV.
10395	Rogers, Thomas	Rails, hand, machines for cutting	Jan. 3, 1854		XIV.
	Rogers, Thomas. (See Fitzgerald, Rogers, & Walker.)				
	Rohr, George, and Thomas D. Henson. (See Henson & Rohr.)				
10582	Rollins, George A	Turning lathes, tool-rest for	Feb. 28, 1854		XIV.
12002	Root, E. K	Fire-arms, machine for boring the chambers in the cylinders of.	Nov. 28, 1854		XIX.
11531	Roper, Sylvester H	Sewing machines	Aug. 15, 1854		III.
11811	Ross, Charles	Mills, grinding surface in	Aug. 17, 1854		XIII.
	Ross, Heywood, & Otis. (See L. Heywood, J. L. Ross, and J. K. Otis.)				
12071	Ross, Joel H	Hot-water apparatus, hygrometric, regulator for	Dec. 12, 1854		V.
11495	Ross, Luther, and G. Potter	Boot and shoe soles, machines for cutting	Aug. 8, 1854		XVI.
11591	Ross, Robert	Valve, steam	Aug. 22, 1854		VI.
12072	Roth, George	Looms	Dec. 12, 1854		III.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10780	Roth, J. A., and J. Lea	Flax, machines for bleaching	April 18, 1854; in England, February 7, 1854.	III.
10808	Roth, J. A., and J. Lea	Flax, processes for bleaching	April 18, 1854; in England, May 26, 1853.	III.
10894	Roth, J. A., and J. Lea	Bleaching apparatus	May 9, 1854; in England, February 7, 1854.	IV.
11329	Roth, J. A., and J. Lea	Scouring piece goods, machines for	July 18, 1854; in England, February 7, 1854.	III.
11755	Rouse, Wanton	Mules, self-acting	Oct. 3, 1854	III.
	Rowe, James	Crushing hard substances, machine for	April 24, 1840; extended March 28, 1854.	Extension.
11652	Rowland, Charles	Tables	Sept. 5, 1854	XVII.
10779	Rowland, Moses T	Tailors' measures	April 18, 1854	XXI.
11085	Rowley, James L., assignor to J. L. Rowley and R. H. Gilson.	Carriages	June 13, 1854	X.
11653	Rugg, B. A., and E. H. Benjamin	Printing-presses, machine for feeding paper to	Sept. 5, 1854	XVIII.
11241	Ruggles Solomon W., assignor to Ruggles, Smith, & Austin.	Presses, self-acting cheese	July 4, 1854	XII.
11511	Ruggles, Solomon W., assignor to S. W. Ruggles and A. R. Smith.	Fan-blower	Aug. 8, 1854	V.
10588	Ruggles, Stephen P	Printing-presses	Feb. 28, 1854	XVIII.
11908	Rumley, Charles	Valves, steam-engine	Nov. 7, 1854	VI.
11909	Rumley, Charles	Engines, rotary	Nov. 7, 1854	VI.
11254	Runge, Gustavus	Doors, trap	July 11, 1854	IX.
261	Russ, Horace P	Pavements, sub-strata for	March 14, 1848; reissued March 28, 1854.	Reissue.
11036	Russell, David	Saw-mill blocks, method of operating	June 6, 1854	XIV.
	Russell, J., & G. W. Coats. (See Coats & Russell.)			
10369	Russell, Jonathan	Forms, irregular, machine for cutting	Jan. 3, 1854	XIV.
11618	Russell, Titus H	Saw-mill dogs	Aug. 29, 1854	XIV.
11569	Rust, Wm. O	Saw-set	Aug. 22, 1854	XIV.
10620	Ryan, Daniel, and J. Flanagan	Water-closets	Mar. 7, 1854	XXII.

11499	Safford, Albert G	Window-sashes, applying springs to	Aug. 8, 1854	IX.
659	Sailor, Samuel H., and John C. Smith, assignors to Warnick & Liebrandt.	Stove, radiator	July 11, 1854	Design.
663	Sailor, Samuel H., assignor to J. G. Abbott and A. Lawrence.	Stoves, cooking	Aug. 11, 1854	Design.
10831	Salomon, John C. Fr	Brick making	April 25, 1854	XV.
11552	Sampson, Elnathan	Hubs to axles, attaching	Feb. 21, 1854	X.
11388	Sampson, Elnathan	Scales, platform	July 25, 1854	XII.
11178	Sanders, B. D.	Winnowers of grain	June 27, 1854	I.
11570	Sangster, Hugh	Lanterns, securing glasses in	Aug. 22, 1854	V.
10913	Sargent, Charles G	Wool, machinery for combing	May 16, 1854	III.
11534	Sargent, Charles G	Wool, combing, machinery for	Aug. 15, 1854	III.
11812	Sargent, Moses, jr.	Roving tubes	Oct. 17, 1854	III.
11179	Saunders, Wm. H.	Axle, carriage	June 27, 1854	X.
11974	Savage, Elliott	Screw-blanks, machine for threading	Nov. 21, 1854	II.
10614	Sawyer, Addison M	Rattans, machines for splitting	Mar. 7, 1854	XXII.
10579	Sawyer, Joseph	Sockets for bench-hooks	Feb. 28, 1854	XIV.
10613	Sawyer, Joseph	Rattans, machines for splitting	Mar. 7, 1854	XXII.
	Sawyer & Clark. (See Lyman Clark, assignor.)			
	Sawyer, Samuel, deceased, W. Dalrymple, executor of.	Corks, machine for cutting	June 10, 1840; extended Jan. 9, 1854.	Extension.
12073	Sawyer, Sylvanus	Rattan machine.	Dec. 12, 1854	XXII.
11509	Saxton, Amos I	Buildings, iron, mode of constructing	Aug. 8, 1854	IX.
10830	Schaum, Frederick	Glass furnaces	April 25, 1854	XV.
11087	Schinz, Charles	Tallow, process for hardening	June 13, 1854	IV.
	Schoaler & Smith. (See Smith, assignor.)			
10546	Schuyler, Joseph M., & William Zern, assignors to D. L. Easterly.	Wire-screens, weaving	Feb. 21, 1854	II.
11445	Schwingroubert, Louis	Shoe horns	Aug. 1, 1854	XVI.
11875	Scott, E. W.	Mast hoops, machine for manufacturing	Aug. 31, 1854	VII.
10931	Scott, Lyman	Mill, grinding, portable	May 16, 1854	XIII.
	Scovill Manufacturing Company. (See E. Brown, assignor.)			
10785	Seagrave, John D	Apples, machines for paring	April 18, 1854	XVII.
11910	Searle, Isaac	Hat bodies, machinery for making	Nov. 7, 1854	III.
11180	Seaver, Peasley	Callipers	June 27, 1854	XIV.
	Seavey, *et al.* (See J. R. Stafford, assignor.)			
10759	Seay, Thomas E	Brick machines	April 11, 1854	XV.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
625	Seibert, Peter, assignor to Alexander Bradley	Stove, cooking	Jan. 31, 1854	Design.
11911	Selleck, Robert M	Harness saddles	Nov. 7, 1854	XVI.
	Sellers & Bancroft. (See Bancroft & Sellers.)			
11335	Senneff, Jacob	Heddles, weavers'	July 18, 1854	III.
11589	Senneff, Jacob	Heddles for looms, machines for casting metallic eyes or males of.	Aug. 22, 1854	III.
11095	Sergeant, Henry C	Boilers, steam, feed water apparatus to	June 14, 1854	VI.
11233	Severson, Benjamin	Wheels, cast-iron car	July 4, 1854	X.
11883	Sewell, William, assignor to Joseph Barton, reassignor to W. Sewell.	Condensers, surface	Oct. 31, 1854	VI.
11712	Seymour, Edward, assignor to Daniel B. Brown	Gold separator	Sept. 19, 1854	II.
10707	Seymour, William H	Harvesters	Mar. 28, 1854	I.
	Seymour & Morgan. (See N. Platt, assignor.)			
10674	Shands, J. G	Mill-stones, machines for dressing	Mar. 21, 1854	XIII.
11035	Shank, Isaac R	Lath machine	June 6, 1854	XIV.
11841	Shanklin, Josiah	Square, scale, level, and bevel	Oct. 24, 1854	VIII.
11460	Shares, Daniel W	Cultivator	Aug. 1, 1854	I.
12075	Shares, Daniel W	Planters, seed, and cultivators	Dec. 12, 1854	I.
	Shaw, A. D. (See John E. Grant, assignor.)			
11571	Shaw, Edmund	Sewing-machine	Aug. 22, 1854	III.
11581	Shaw, Melvin, assignor to M. Shaw and D. G. Wheeler	Sewing-machines, clamps for	Aug. 22, 1854; antedated Feb. 22, 1854.	III.
10646	Shaw, Philander	Cultivators, rotary	Mar. 14, 1854	I.
10868	Shaw, Philander	Engines, air	May 2, 1854	XI.
11680	Shaw, Philander	Sewing-machines	Sept. 12, 1854	III.
	Shaw, Samuel. (See Mark R. Pearson, assignor.)			
11141	Shaw, Warren, and P. G. Green	Cloth, tentering	June 20, 1854	III.
10760	Shaw, W. A., and George Parker	Lamps, street, gas	April 11, 1854	V.
11443	Shearman, Simeon	Grain to the mill-stones, method of cleaning and feeding in.	Aug. 1, 1854	XIII.
11033	Sheffield, John	Saws, mill, apparatus for filing	June 6, 1854	II.
11681	Sheldon, Samuel	Mills, portable, grist	Sept. 12, 1854	XIII.

11842	Sherwood, Benjamin	Safes	Oct. 24, 1854	II.
11794	Sherwood, John P	Ovens, damper for	Oct. 10, 1854	V.
12103	Sherwood, John P	Cut-nail machine	Dec. 19, 1854	II.
	Shield & Griffiths. (See Griffiths & Shield.)			
10494	Shimer, Michael	Winnowers	Feb. 7, 1854	I.
12033	Shimer, Michael	Brakes, railroad car	Dec. 5, 1854	X.
	Shippen, E. W. (See William Campbell, assignor.)			
12003	Shirley, Daniel H	Piano-forte action	Nov. 28, 1854	XVIII.
10867	Short, Sewall	Violins	May 2, 1854	XVIII.
11090	Shove, William	Buckles	June 13, 1854	II.
10382	Shuttleworth, John	Looms, power	Jan. 3, 1854	III.
11619	Sibbet, R L	Tenoning spokes, method of	Aug. 29, 1854	XIV.
10642	Sickels, Gerard	Engines, rotary	Mar. 14, 1854	VI.
10761	Sigler, Henry	Fish-hooks	April 11, 1854	XXII.
11461	Sikes, James W	Vessels, masts of, cap or withe for the	Aug. 1, 1854	VII.
	Silsby & Hine. (See R. M. Hine, assignor.)			
	Silsby, —— *et al.* (See B. Holly, assignor.)			
	Silsby & Race. (See W. Race, assignor.)			
11092	Silver, Thomas	Windows, tightening	June 13, 1854	IX.
11094	Simonds, G. B., and A. Breaer	Spark arresters	June 13, 1854	V.
11682	Simonds, Lorenzo	Teeth, palate for artificial	Sept. 12, 1854	XX.
	Simpson, F. and G, *et al.* (See William Lyon, assignor.)			
12034	Simpson, James E	Docks, dry	Dec. 5, 1854	IX.
10842	Singer, Isaac M	Sewing machines	May 2, 1854	III.
10974	Singer, Isaac M	Sewing machines	May 30, 1854	III.
10975	Singer, Isaac M	Sewing machines	May 30, 1854	III.
278	Singer, Isaac M	Sewing machines	Aug. 12, 1851; reissued Oct. 3, 1854.	Reissue.
268	Singer & Clark. (See Morey & Johnson.)			
11843	Sirret, Emile	Lanterns, fastening lamps in	Oct. 24, 1854	V.
10718	Sizer, Ephraim, Titus, and Emerson, and A. Halladay.	Braiding machine, Sacket's	Mar. 28, 1854	III.
11572	Skinner, Halcyon, and W. Greenhalgh	Gauge, carpenters'	Aug. 22, 1854	XIV.
10909	Skinner, Smith A	Splints, surgical	May 16, 1854	XX.
11912	Slater, James	Saws, circular, form for and mode of operating	Nov. 7, 1854	XIV.
10432	Sloan, Thomas J	Boilers, steam, apparatus for indicating the action of the feed pump to.	Jan. 17, 1854	VI.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10912	Sloan, Thomas J	Boilers, steam, water indicators for	May 16, 1854	VI.
12035	Sloan, Thomas J	Sashes, window, casting metal	Dec. 5, 1854	II.
11683	Smart, Don Carlos	Curtain fixtures	Sept. 12, 1854	XVII.
10708	Smart, Joseph	Pumps	Mar. 28, 1854	XI.
10836	Smiley, De Witt C	Oilers for machinery	April 25, 1854	XII
11620	Smith, A. J	Corn shellers	Aug. 29, 1854	I.
	Smith, Artemas R., and S. W. Ruggles. (See S. W. Ruggles, assignor.)			
12036	Smith, D. G	Cars, railroad, running-gear of	Dec. 5, 1854	X.
10939	Smith, D. M	Lathe dog	May 16, 1854	XIV.
	Smith, E., *et al.* (See James E. Crowell, assignor.)			
11303	Smith, F. B	Jacks, lifting	July 11, 1854	XII.
11274	Smith, F. G	Engines, steam, condensers for	July 11, 1854	VI.
11684	Smith, F. G	Engines, fire, mode of operating	Sept. 12, 1854	XI.
11753	Smith, Francis H	Brick-machines	Oct. 3, 1854	XV.
642	Smith, G., and H. Brown	Stoves, air-tight	April 25, 1854	Design.
649	Smith, G., H. Brown, and J. A. Read, assignors to Abbott & Lawrence.	Ranges, cooking, portable	May 23, 1854	Design.
11338	Smith, G. H	Steel, direct from the ore, process of making	July 18, 1854	II.
10709	Smith, Henry C	Shingle-machines, construction of	Mar. 28, 1854	XIV.
10422	Smith, Hezekiah B	Mortising-machines	Jan. 10, 1854	XIV.
10535	Smith, Horace, and D. B. Wesson	Fire arms	Feb. 14, 1854	XIX.
11496	Smith, Horace, and D. B. Wesson	Cartridges	Aug. 8, 1854	XIX.
279	Smith, Horace, and D. B. Wesson	Fire-arms	Feb. 14, 1854; reissued October 10, 1854.	Reissue.
11497	Smith, Ira, and J. Stonesiper	Lamps, lard	Aug. 8, 1854	V.
	Smith, Jeremiah, and Carey. (See Carey & Smith.)			
11913	Smith, Jeremiah P	Corn-shellers	Nov. 7, 1854	I.
10553	Smith, John B	Clothes-pins, machine for slitting	Feb. 21, 1854	XVII.
11253	Smith, J. B	Mortising sash-stiles, machine for	July 11, 1854	XIV.
658	Smith, John C., assignor to Warnick & Liebrandt	Stove, cooking	July 11, 1854	Design.

	Smith, J. C. & Sailor. (See Sailor & Smith.)			
12104	Smith, Jonathan	Docks, dry and other, method of holding vessels by the keel in.	Dec. 19, 1854	IX.
11275	Smith, Josiah M	Stone and metals, machines for planing	July 11, 1854	XV.
11389	Smith, J. W	Candlesticks, sheet-metal	July 25, 1854	V.
11702	Smith, Marvin	Water-metre	Sept. 19, 1854	XI.
10643	Smith, Nathan, and A. Crandall	Cards, cotton-machines for grinding	Mar. 14, 1854	II.
	Smith, R. M., and L. W. Leeds. (See Leeds & Smith.)			
	Smith, Ruggles, and Austin. (See S. W. Ruggles, assingor.)			
10560	Smith, Solomon, assignor to S. Smith and William Schoaler.	Parti-coloring machines	Feb. 1, 1854	IV.
11273	Smith, Thomas B	Cow-catchers	July 11, 1854	IX.
252	Smith, William H	Slags of furnaces, utilizing	Dec. 7, 1852; reissued January 3, 1854.	Reissue.
11336	Smith, William W	Buckles	July 18, 1854	XVI.
10835	Snell, Varanes	Boot-counters, machines for cutting and skiving	April 25, 1854	XVI.
11307	Snow, George B	Bells, mode of ringing, by steam	July 11, 1854	XXII.
11984	Snow, H., assignor to James A. Woodbury	Planing machines, presser bar for	Nov. 21, 1854	XIV.
662	Snow, Wm. M	Stoves, cooking	Aug. 8, 1854	Design.
11337	Snyder, Abram	Truck, railroad car	July 18, 1854	X.
266	Snyder, Elisha S	Mills for grinding	Feb. 10, 1846; reissued June 20, 1854.	Reissue.
11340	Snyder, John F	Fire-places, metallic	July 18, 1854	V.
10583	Snyder, John G., and Joseph Young	Planters, seed	Feb. 28, 1854	I.
10809	Sohn, Anthony	Match frames, machines for filling	April 18, 1854	IV.
10604	Sollenberger, Joseph	Brakes, carriage	Mar. 7, 1854	X.
10745	Sollenberger, Joseph	Vine, training the	April 4, 1854	I.
11304	Southworth, Albert S., and J. J. Hawes	Daguerreotypes for stereoscopes, taking	July 11, 1854	XVIII.
10461	Soule, Charles R	Grain, threshers and separators of	Jan. 24, 1854	I.
10446	Souther, George	Tires for carriage wheels	Aug. 1, 1854	II.
	Spafford, Charles, administrator of George Spafford, deceased.	Paper, machine for boiling and washing rags for manufacturing.	Sept. 2, 1840; extended Aug. 25, 1854.	Extension.
10415	Spafford, J. P	Saw gummers	Jan. 10, 1854	XIV.
	Spalding, W. C. (See Alonzo S. Woodward.)			
11280	Spangler, Washington, assignor to himself, E. H. Chambers, and W. F. Wilson.	Augers, gimlets, &c	July 11, 1854	XIV.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10936	Spear, Matthew	Mitre box	May 16, 1854	XIV.
12105	Speed, John J., jr., and John A. Bailey	Shingle machine	Dec. 19, 1854	XIV.
11795	Speer, Cornelius	Ginning and cleaning cotton	Oct. 10, 1854	III.
11019	Speers, Noah W	Hydrant cap	June 6, 1854	XI.
11234	Speight, John S	Kilns, brick	July 24, 1854	XV.
12004	Spence, Nathaniel	Bonnet frames, moulds for pressing	Nov. 28, 1854; antedated Nov. 10, 1853.	XXI.
10832	Spencer, A., and A. Loeschner	Hat bodies, forming and hardening	April 25, 1854	III.
11535	Spencer, George	Car windows, railroad	Aug. 15, 1854	IX.
	Spencer, O., and John Webster. (See Webster & Spencer.)			
11573	Spencer, Robert	Saddle trees, harness	Aug. 22, 1854	XVI.
11576	Spencer, Robert	Saddles, harness	Aug. 22, 1854	XVI.
11339	Spilman, Peter	Garments, cutting, apparatus for laying off the seye in.	July 18, 1854	XXI.
10897	Sprague, Alexander M	Boilers, steam, flue bottom of	May 9, 1854	VI.
10898	Sprague, Alexander M	Engines, steam, pistons for	May 9, 1854	VI.
11091	Sprague, E. H	Printers' forms, locking up	June 13, 1854	XVIII.
10644	Sprague, Welcome	Planters, seed	Mar. 14, 1854	I.
11332	Spratt, James	Sealing, hermetical	July 18, 1854	XXII.
	Spratt, James, and H. C. Nicholson. (See Henry C. Nicholson.)			
11813	Squire, John J	Sawing-machine	Oct. 17, 1854	XIV.
10758	Stafford, Hiram	Rat-traps	April 11, 1854	XXII.
10813	Stafford, James R	Distilling and condensing apparatus	April 25, 1854	IV.
	Stafford, James R., assignor to Goodrich, Seavey, & Co.	Boilers for culinary purposes	June 12, 1847; disclaimer entered July 13, 1854.	Disclaimer.
11093	Stagg, David I	Locks, in operating bolts, and for controlling series of doors.	June 13, 1854	II.
10710	Stagg, Thomas G	Tenoning, &c., blind slats, machines for	Mar. 28, 1854	XIV.

10521	Standish, John, assignor to J. Standish and H. A. Miller.	Boots and shoes, machines for pegging	Feb. 14, 1854	XVI.
11084	Stark, J., and L. Perrigo.	Spoke-machines, device for holding pieces in	June 13, 1854	XIV.
11574	Starr, Alfred A	Supporters, catamenial	Aug. 22, 1854	XX.
633	Starr, Frederick	Piano-fortes, cast-iron legs of	Feb. 28, 1854	Design.
634	Starr, Frederick	Piano-fortes, cast-iron pedal lyre for	Feb. 28, 1854	Design.
10967	Steadman, Thomas S.	Harvesters, clover	May 23, 1854	I.
10545	Stearns, D. and H.	Cloth, stretching and drying	Feb. 21, 1854	III.
	Stebbins, Lucius	Maps, mode of coloring	Mar. 12, 1840; extended Feb. 15, 1854.	Extension.
12074	Stedman, George W	Sewing-machine	Dec. 12, 1854	III.
12106	Stein, Louis	Fans, revolving, for apartments	Dec. 19, 1854	XVII.
	Stephenson, George. (See R. Porter, assignor.)			
10525	Sterling, W. G	Hoes, planting	Feb. 14, 1854	I.
10833	Sterling, Wm. G	Roofs, forming	April 25, 1854	IX.
11703	Sterling, W. G	Counting machines, and machines for indicating motion.	Sept. 19, 1854	VIII.
	Stevens, A. G., *et al.* (See White, assignor.)			
	Stevens, E. M., and Butterfield. (See Butterfield, assignor.)			
	Stevens & Clegg. (See Thomas Clegg, assignor.)			
	Stevens & Clegg. (See Thomas Clegg, assignor.)			
11975	Stevens, John Lee	Furnaces	Nov. 21, 1854; in England, Oct. 1, 1852.	V.
11622	Stevens, Joshua	Chairs for exercising	Aug. 29, 1854	XX.
10994	Stevens, M. W., and E. G. Kingsley	Sewing-machines	May 30, 1854	III.
	Stevens, Richard F., and others. (See Samuel B. Howd.)			
11334	Stevenson, H. C.	Washing-machines	July 18, 1854	XVII.
11814	Stevenson, Richard B	Water-pipes	Oct. 17, 1854	XI.
11876	Stevenson, William J	Furnace, soldering	Oct. 31, 1854	V.
12076	Stever, Jeremiah	Metals, machines for scraping	Dec. 12, 1854	II.
	Stewart & Allen. (See Allen & Stewart.)			
	Stewart & Allen. (See Allen & Stewart.)			
	Stewart & Allen. (See Allen & Stewart.)			
	Stewart & Allen. (See Allen & Stewart.)			
	Stewart, James M., and H. C. Bridgham. (See Bridgham & Stewart.)			

Alphabetical list of patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
681	Stewart, Jos., assign's to Cresson, Stuart, & Peterson.	Stoves, box	Dec. 5, 1854	Design.
10932	Stewart, Linus	Saw	May 16, 1854	XIV.
10370	Stewart, Matthew	Malt-kilns, floor plates of	Jan. 3, 1854	IV.
12037	Stewart, Matthew	Brushes, manufacture of	Dec. 5, 1854	XVII.
	Stickney, Charles T., *et al.* (See James E. Crowell, assignor.)			
12077	Stieren, Edward	Processes of treating the mother water of salines	Dec. 12, 1854	IV.
10462	Stiles, Moses C., and T. S. Lewis	Window-blinds, machine for making	Jan. 24, 1854	XIV.
	Stillman, Allen & Co. (See Smith W. Bullock, assignor.)			
11577	Stillman, Paul	Counting-machines	Aug. 22, 1854	VIII.
11949	Stillson, George D	Excavating-machine	Nov. 14, 1854	IX.
	Stillwell, Stephen & Keech. (See Keech & Stillwell.)			
10433	Stimpson, C. W	Photographic plate vice	Jan. 17, 1854	XVIII.
	Stimpson, H. H. and F. H. (See Daniel Treadwell, assignor.)			
11819	Stimpson, James H., executor of James Stimpson, deceased.	Liquids, vessels for holding	Oct. 17, 1854; antedated April 17, 1854.	XVII.
10605	Stoakes, James W	Vessels, apparatus for paying the seams of	Mar. 7, 1854	VII.
11734	Stockton, Joseph B	Straw-cutters, springs to the knives of	Sept. 26, 1854	I.
10397	Stoddard, Oren	Sawing logs, machinery for	Jan. 3, 1854	XIV.
10906	Stoddard, William	Shingle-machine, rotary	May 16, 1854	XIV.
11950	Stoddard, William	Shingle-machine	Nov. 14, 1854	XIV.
12038	Stone, Amasa	Fire, method of extinguishing in inaccessible places	Dec. 5, 1854	V.
10603	Stone, R. J. R	Boring and mortising carriage-hubs, machines for	Mar. 7, 1854	XIV.
11442	Stone, Sandford	Cart, self-loading and dumping	Aug. 1, 1854	X.
	Stonesifer & Smith. (See Smith & Stonesifer.)			
10834	Storm, William M	Bullet-moulds	April 25, 1854	XIX.
10846	Storm, William M	Fire-arms, chargers for	May 2, 1854	XIX.

	Story, Jos., and Tucker. (See Hiram Tucker, assignor.)			
	Stott, J. B., and others. (See J. Harris.)			
11391	Stouder, David	Spade, ditching	July 25, 1854	I.
11312	Stouffer, J., P. Brough, and J. W. Barr	Flouring and bolting	July 11, 1854	XIII.
11498	Stout, Thomas B	Car-coupling	Aug. 8, 1854	X.
11088	Stowell, John	Steering-apparatus	June 13, 1854	VII.
	Stoy, D. C. (See Harig & Stoy.)			
	Stoy, D. C, and A. S. Harig. (See Harig & Stoy.)			
	Stratton, Lorenzo, and L. Hill. (See L. Hill, assignor.)			
11181	Straub, Isaac	Mills, in grinding	June 27, 1854	XIII.
11390	Straub, Isaac	Cutter, corn-cob	July 25, 1854	I.
11306	Straw, Willis	Chain-hook	July 11, 1854	II.
10935	Street, William H	Printing-presses, attaching blankets to cylinders for	May 16, 1854	XVIII.
10969	Strode, Joseph C	Hydraulic rams	May 23, 1854	XI.
11621	Strode, Joseph C	Valve, puppet, for hydraulic rams	Aug. 29, 1854	XI.
	Stuart, *et al.* (See Allen & Stewart, assignors.)			
	Stuart, *et al.* (See Allen & Stewart, assignors.)			
	Stuart, *et al.* (See Beesley & Delaney, assignors.)			
	Stuart, *et al.* (See Beesley & Delaney, assignors.)			
678	Stuart, David, assignor to W. P. Cresson & Co.)	Stoves, "egg-stove."	Nov. 7, 1854; antedated May 7, 1854.	Design.
11333	Stubblefield, Thomas	Gauges, steam	July 18, 1854	VI.
11444	Stull, John	Saw-mills	Aug. 1, 1854	XIV.
	Stumer, C. (See C. F. Thomin.)			
	Sturoc, W. C., and Josiah Turner. (See Turner & Sturoc.)			
	Sturtevant, S., and A. Hall. (See Hall & Sturtevant.)			
10869	St. John, L. C	Engine, hydrodynamic	May 2, 1854	XI.
11305	St. John, R. H	Bedstead fastenings	July 11, 1854	XVII.
10968	Suggert, Lewis C	Processes for treating hemp	May 23, 1854	IV.
11182	Sumner, Thomas	Hammers, steam	June 27, 1854	VI.
10580	Sumner, William	Organs	Feb. 28, 1854	XVIII.
10423	Swaim, James	Magnetic toy, called the Magical Cupid	Jan. 10, 1854	VIII.
	Swan, Elias A. (See W. J. Casselman, assignor.)			

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
109	Swartz, David	Ploughs	June 22, 1852; additional improvement February 28, 1854.	Additional improve'nt.
11575	Swartz David and Samuel	Ploughs, fastenings of	Aug 22, 1854	I.
11951	Swartz, Jacob	Harvesters, grain and grass	Nov. 14, 1854	I.
11089	Sweeney, Peter	Boilers, steam	June 13, 1854	VI.
11278	Sweeney, Peter	Furnace, hot-air	July 11, 1854	V.
	Sweet, P. T. (See G. S Blodgett.)			
11536	Sweet, William A	Fire-arms	Aug. 15, 1854	XIX.
10645	Swett, James H	Spike machines, hanging of the griping jaws of, in weighted levers.	Mar. 14, 1854	II.
11507	Swingle, Alfred, assignor to E. Townsend	Sewing machines	Aug. 8, 1854	III.
12078	Taft, Benjamin F	Boring machine	Dec. 12, 1854	XIV.
11017	Taft, Timothy F	Planing machines, device for operating cutter heads of.	June 6, 1854	XIV.
11242	Taggart, John, assignor to John Taggart and Richard Pitts.	Excavating earth, machine for	July 4, 1854	IX.
12107	Taggart, Samuel	Flour, clutch in machines for packing	Dec. 19, 1854	XIII.
	Talbot, John G. (See Briggs & Talbot.)			
12005	Talbot, William	Looms for weaving bags	Nov. 28, 1854	III.
10899	Tallcot, Daniel	Hatches, construction of	May 9, 1854	IX.
11704	Tapley, John	Pumps	Sept. 19, 1854	XI.
10379	Tapley, Philip P	Leather, machines for polishing	Jan. 3, 1854	XVI.
256	Taplin, John A	Horse-powers, portable	Dec. 30, 1841; reissued January 24, 1854.	Reissue.
12039	Tasker, Thomas T	Furnace of hot water apparatus, regulating the	Dec. 5, 1854	V.
10647	Taylor, Abijah	Valves, faucet, steam-engine	Mar. 14, 1854	VI.
11005	Taylor, Donald	Berth-knee former	June 6, 1854	VII.
10933	Taylor, H. S	Books, machine for paging	May 16, 1854	XVIII.
12040	Taylor, James	Cotton thread, covering, with wool	Dec. 5, 1854	III.

11097	Taylor, T. C	Soap compounds	June 13, 1854; in England, Sept. 17, 1853.	IV.
11098	Taylor, T. C	Soap manufacturing processes	June 13, 1854	IV.
11510	Taylor, Weatherill	Ships' blocks, bushing sheaves for	Aug. 8, 1854	VII.
11952	Tayman, Benjamin J	Cloth, machinery for stretching and drying	Nov. 14, 1854	III.
10946	Teal, Peter, and Charles Tyler, assignors to W. P. Cresson & Co.	Lathes for turning the interior surface of hollow ware.	May 23, 1854; in England, April 19, 1853.	XIV.
11142	Terry, Adrian R	Gas retorts, coating	June 20, 1854	IV.
11308	Terry, Jabez C	Screw wrenches	Jully 11, 1854	II.
10372	Terry, John B	Pins, machines for sticking	Jan. 3, 1854	II.
	Terry, John B. (See Thomas W. Harvey, assignor.)			
11767	Thatcher, Joseph	Gas meters, movements of	Oct. 3, 1854	IV.
10765	Thayer, George W	Bridges, iron, trusses for	April 11, 1854	IX.
11096	Thomas, Earl of Dundonald	Compositions for coating telegraphic wires, and for other purposes.	June 13, 1854; in England, Oct. 6, 1852.	IV.
10995	Thomas, Robert S	Typograph	May 30, 1854	XVIII.
	Thomas, Samuel T., and E. A. Everett, administratrix of E. Everett. (See Edward Everett.)			
11919	Thomas, Samuel T., and Eliza Ann Everett, administratrix of E. Everett.	Loom beams	Nov. 7, 1854	III.
10837	Thomas, W. B., and S. Hickok	Car seats, railroad	April 25, 1854	X.
11815	Thomin, C. F., and C. Stumer	Processes for enamelling iron	Oct. 17, 1854	IV.
	Thompson & Farr. (See Mansure, assignor.)			
	Thompson, T. C	Sewing machines	Mar. 29, 1853; disclaimer entered Feb. 16, 1854.	Disclaimer.
11500	Thompson, John, and A. S. Moore	Boot and shoe soles, machines for cutting	Aug. 8, 1854; antedated Feb. 8, 1854.	XVI.
11252	Thompson, John M	Engines, beam, parallel motion for	July 11, 1854	VI.
11878	Thompson, Julius	Odometers	Oct. 31, 1854	VIII.
10766	Thompson, jr., Nathan	Boats, life, reversible	April 11, 1854	VII.
12108	Thompson, jr., Nathan	Life preserving seats	Dec. 19, 1854; in England, Sept. 18, 1854.	VII.
10557	Thompson, Smith	Yam, spooling from the cop	Feb 21, 1854	III.
11276	Thompson, Willet	Ventilator, ship	July 11, 1854	V.
11184	Thorn, Enoch	Sewers, ventilating	June 27, 1854	V.
11705	Thornley, William	Wheels to axles, safety washer for securing	Sept. 19, 1854	X.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
116	Thornley, William	Washers, safety, for securing wheels to axles	Sept. 19, 1854; additional improvement October 31 1854.	Add'l imp't.
11877	Thorp, Samuel R.	Odometers	Oct. 31, 1854	VIII.
10484	Thring, Frederick J.	Carpet bags	Jan. 31, 1854	XXI.
	Tidey, M. B., *et al.* (See M. J. Wheeler, *et al.*)			
12086	Tiebe & Muhle, assignors to Tiebe, Muhle, & Homan.	Tea pots, casting the spouts of	Dec. 12, 1854	XVII.
10815	Tiffany, Joseph C.	Plough, ditching	April 25, 1854,	I.
11766	Tilghman, R. A.	Processes for purifying fatty bodies	Oct. 3, 1854	IV.
11976	Tilghman, Samuel H. T.	Inhaling apparatus	Nov. 21, 1854	XX.
10380	Tilton, William B.	Guitars	Jan. 3, 1854	XVIII.
632	Tilton, William B.	Guitars	Feb. 21, 1854	Design.
11347	Tingley, Albert H., assignor to himself, E. W. and H. F. Tingley.	Stone and marble, machines for sawing	July 18, 1854	XV.
12005	Tinsley, William	Mitre box	Nov. 28, 1854	XIV.
12041	Titus, William D.	Lanterns	Dec. 5, 1854	V.
10764	Toll, Jose	Rat traps	April 11, 1854	XXII.
11341	Tomlinson, Seymour	Docks of horses, machine for holding	July 18, 1854	XXII.
11796	Tongue, Henry	Engines, steam	Oct. 10, 1854	VI.
10810	Towers, William H.	Oysters, opening, machine for	April 18, 1854	XVII.
10934	Towers, William H.	Guitars	May 16, 1854	XVIII.
11392	Towers, William H.	Horse shoes	July 25, 1854	II.
11977	Towers, William H.	Clothes clamp	Nov. 21, 1854	XVII.
10838	Towle, Simeon	Syringe, eye-bath	April 25, 1854	XX.
10485	Town, Edward	Books, machine for paging	Jan. 31, 1854	XVIII.
	Townsend, Elmer. (See A. Swingle, assignor.)			
	Townsend, Elmer. (See Sidney S. Turner, assignor.)			
	Townsend, Elmer. (See Sidney S. Turner, assignor.)			

	Townsend, Elmer, and G. J. Wardwell. (See G. J. Wardwell, assignor, &c.)			
12007	Tracy, Edward H.	Valves, inclined sliding	Nov. 28, 1854	XI.
11583	Treadwell, Daniel, assignor to H. H. and F. H. Stimpson.	Furnaces, operating dampers of	Aug. 22, 1854	V.
11578	Treadwell, Francis C., jr.	Ovens	Aug. 22, 1854	V.
11765	Tripp, Ervin B.	Press, printing	Oct. 3, 1854	XVIII.
10712	Trott, George	Engines, steam, oil-cup for	Mar. 28, 1854	VI.
10711	Trotter, Jonathan G.	Zinc white, furnaces for	Mar. 28, 1854	IV.
10839	True, Isaac	Water-wheel, reaction	April 25, 1854	XI.
10451	Trumbull, Harvey	Straw-cutters, feed apparatus of	Jan. 24, 1854	I.
11978	Trussell, Thomas W.	Mill-stones, dressing	Nov. 21, 1854	XIII.
10561	Tucker, Hiram, assignor to H. Tucker and Jos. Story.	Stone, applying colors to	Feb. 21, 1854; in England Sept. 24, 1853.	IV.
12008	Tugnot, George	Lathe, rotary	Nov. 28, 1854	XIV.
11501	Turner, Edward	Hame fastenings	Aug. 8, 1854	XVI.
10949	Turner, George B.	Smut machines	May 23, 1854	XIII.
11183	Turner, Hartwell L.	Water-wheels, head-gate for	June 27, 1854	XI.
10495	Turner, Josiah and W. C. Sturoc	Winnowers	Feb. 7, 1854	I.
11588	Turner, Sidney S., assignor to Elmer Townsend	Sewing machines	Aug. 22, 1854	III.
11631	Turner, Sidney S., assignor to Elmer Townsend	Sewing machines	Aug. 29, 1854	III.
10371	Tuttle, Edward A.	Register, hot-air	Jan. 3, 1854	V.
	Tyler, Charles, and Peter Teal. (See Teal & Tyler, assignors to Cresson & Co.			
10940	Tyler, Philos B.	Saw-teeth, method of nibbing	May 16, 1854	XIV.
11202	Tyler, Philos B.	Cordage machinery	June 27, 1854	III.
11342	Tyler, Philos B.	Winding rope, cord and yarn	July 18, 1854	III.
11502	Tyler, P. B., and Benj. Lathrop	Castors, furniture, rollers of	Aug. 8, 1854	XVII.
	Tyler, P. B., and B. Lathrop. (See White, assignor.)			
10602	Tyng, L. B.	Turning lathes, tail-stocks for	Mar. 7, 1854	XIV.
	Tyrrel, T. (See E. D. Williams.)			
10717	Underhill, Henry	Printing-press, hand	Mar. 28, 1854	XVIII.
10483	Underwood, Benjamin	Printing-blocks, construction of	Jan. 31, 1854	XVIII.
11709	Upton, Benjamin F.	Daguerreotype plates, apparatus for polishing	Sept. 19, 1854	XVIII.
	Upton, ——. (See Joseph Perkins, assignor.)			
	Upton, H. P. (See Elisha Pratt, assignor.)			

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
	Upton, H. P., and others. (See Jno. C. Reed, assignor.)			
10777	Ustick, Stephen	Brick machines	April 18, 1854; antedated Nov. 15, 1853.	XV.
12109	Utley, Grey	Boot-crimping machines	Dec. 19, 1854	XVI.
	Vail, A. (See S. F. B. Morse, assignor.)			
10687	Valentine, E., and A. Bradway	Staves, machines for jointing	Mar. 28, 1854	XIV.
11979	Vanbunschoten, Isaac	Lamps	Nov. 21, 1854	V.
10996	Vanduzen, B. C., assignor to J. B. Martin and B. C. Vanduzen.	Furnace grate-bars	May 30, 1854	V.
11393	Vansant, John E	Vessels, arrangement of indicating tubes for ascertaining draught of and for trimming.	July 25, 1854	VII.
11879	Vansyckel, Samuel	Grate-bars	Oct. 31, 1854	V.
10840	Van Allen, C. D	Bedstead, invalid	April 25, 1854	XVII.
11590	Van Anden, Wm	Rolling shoulders on axles, machines for	Aug. 22, 1854	II.
11394	Van Antwerp, Abraham	Paddle-wheels	July 25, 1854	VII.
12009	Van Fleet, Daniel	Planing-machine	Nov. 28, 1854	XIV.
11771	Van Hoesen, Levi, assignor to New Haven Iron Railing Company.	Piano-forte stools	Oct. 3, 1854	XVIII.
630	Vedder, N. S., assignor to A. T. Dunham & Co	Stove, parlor	Feb. 14, 1854	Design.
11630	Vice, T. C	Windmill sails, method of furling and unfurling	Aug. 29, 1854	XI.
11106	Victory, Edmund, assignor to D. M. Lindley and G. Goulding.	Wool, spinning, machinery for	June 13, 1854	III.
11099	Vitally, Anthony, and Carl Kolb	Tools securing, to their handles	June 13, 1854	II.
11797	Volkening, Henry	Polishing-machine	Oct. 10, 1854	XIV.
	Vose, Albert. (See Hardman & Vose.)			
626	Vose, Samuel D	Stoves, cooking	Feb. 14, 1854; antedated Dec. 30, 1853.	Design.
627	Vose, Samuel D	Stoves, cooking	Feb. 14, 1854; antedated Dec. 30, 1853.	Design.

628	Vose, Samuel D	Stoves, cooking	Feb. 14, 1854; antedated Dec. 30, 1853.	Design.
629	Vose, Samuel D	Stoves, parlor	Feb. 14, 1854; antedated Dec. 30, 1853.	Design.
637	Vose, Samuel D	Stoves, coal	Mar. 28, 1854	Design.
639	Vose, Samuel D	Stoves, cooking	Mar. 28, 1854	Design.
10999	Waddell, Robert	Engines, steam, balancing slide-valves of	June 6, 1854	VI.
11844	Wade, Oron W	Stoves	Oct. 24, 1854	V.
11024	Wade, Robert M	Lubricator	June 6, 1854	XII.
	Wadsworth, Samuel. (See Matthew Cridge.)			
	Wagstaff, John C. (See D. W. Gitchell, assignor.)			
	Wagstaff, William. (See G. W. French.)			
11537	Wait, I. T. and L. J	Planters, seed	Aug. 15, 1854	I.
11395	Wakefield, Charles A	Planters, seed	July 25, 1854	I.
12010	Wakeley, William	Drills, metal	Nov. 28, 1854	II.
10997	Waley, William, assignor to Jonathan Whipple, jr	Blocks, pipe, self-acting	May 30, 1854	XII.
11315	Walker, Matthew, assignor to M. Walker & Sons	Fence, iron picket	July 11, 1854	II.
11451	Walker, William B	Brooms, manufacture of	Aug. 1, 1854	XVII.
	Walker, William C. (See Fitzgerald, Rogers, & Walker.)			
11047	Wallace, Thomas, and Elizabeth Backmeister, executrix of H. Backmeister.	Blowing fan	June 6, 1854	II.
10416	Walworth, Caleb C	Valve, float, for discharging condensed water	Jan. 10, 1854	V.
11311	Ward, William E.	Window-blinds, iron slats for, mode of manufacturing.	July 11, 1854	IX.
11625	Wardwell, Charles P. S	Tenons, machine for cutting	Aug. 29, 1854	XIV.
11346	Wardwell, George I., assignor to G. L Wardwell and E. Townsend.	Boots and shoes, machines for pegging	July 18, 1854	XVI.
10436	Ware, Charles T. P., assignor to D. C. Morehead	Clasps	Jan. 17, 1854	XXII.
11624	Warlick, Noah	Horse-shoeing apparatus	Aug. 29, 1854	II.
11654	Warner, Daniel, jr	Flax, machinery for dressing	Sept. 29, 1854	III.
	Warnick & Liebrandt. (See John C. Smith.)			
	Warnick & Liebrandt. (See Sailor & Smith.)			
10434	Warren, Ira	Tonsil instrument	Jan. 17, 1854	XX.
11450	Warth, Albin	Engines, fire	Aug. 1, 1854	XI.
11798	Warth, Albin	Turning-lathes	Oct. 10, 1854	XIV.
11845	Warwick, William	Mills	Oct. 24, 1854	XIII.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
11185	Washburn, Philo, H. G. O. White, and George A. Copeland.	Coffins	June 27, 1854	XXII.
11914	Washington, B. H.	Furnaces, means for directing the blast in	Nov. 7, 1854	V.
11980	Waterbury, Milan	Planters, seed	Nov. 21, 1854	I.
12079	Waterman, H.	Engines, steam, condensers for	Dec. 12, 1854	VI.
10778	Waterman, Stephen	Sawing-machine, circular	April 18, 1854	XIV.
11623	Waters, E.	Breast-cups	Aug. 29, 1854	XVII.
11432	Watson, William	Stone and marble saws	Aug. 1, 1854	XV.
11343	Watt, Charles, and H. Burgess.	Paper from wood, manufacture of	July 18, 1854; in England, Aug. 19, 1853.	III.
11981	Watt, William	Processes, hemp-rotting	Nov. 21, 1854; in England, May 22, 1852.	IV.
11816	Wayne, Henry	Toilet-glass, joint for	Oct. 17, 1854	XXI.
10870	Weare, John M.	Milker's protector	May 2, 1854	I.
11396	Webb, Benjamin	Polishing-wheels	July 25, 1854	II.
12042	Webb, Ellis	Hydraulic ram	Dec. 5, 1854	XI.
10511	Webb, Joseph W.	Locks, door, portable	Feb. 7, 1854	II.
11539	Webb, Timothy U.	Lightning-rods, insulators for	Aug. 15, 1854	VIII.
10688	Webber, Elbridge	Ships' blocks	Mar. 28, 1854	VII.
10871	Webber, Elbridge	Planing-knife, rotary	May 2, 1854	XIV.
11915	Webber, Elbridge	Shovel-handles, machinery for making head part of	Nov. 7, 1854	II.
12043	Webber, Elbridge	Churns	Dec. 5, 1854	I.
11764	Webster, Benjamin B.	Curtains, mosquito	Oct. 3, 1854	XVII.
10767	Webster, John	Lubricator	April 11, 1854	XII.
10529	Webster, John, and O. Spencer, assignors to John Webster.	Gas-burners	Feb. 14, 1854	V.
	Webster, L. O., & G. W. Wood. (See Wood & Webster.)			
10712	Webster, William	Metal, sheet, machines for bending	Mar. 28, 1854	II.
11186	Weed, Henry	Bonnet frames, wire, mode of constructing	June 27, 1854	XXI.
12011	Weed, Theodore E.	Sewing machines	Nov. 28, 1854	III.

10872	Weeks, Asa	Bit, expansive	May 2, 1854	II.
12080	Weeks, Daniel P	Furnaces, hot-air	Dec. 12, 1854	V.
12110	Weeks, Daniel P	Range, oven cooking	Dec. 19, 1854	V.
11706	Weeks, John J	Sausage stuffers	Sept. 19, 1854	XVII.
11735	Weeks, John J	Harvesters of grain and grass	Sept. 26, 1854	I.
11105	Weight, Joseph	Cloth, napping, machinery for	June 13, 1854	III.
12081	Wiemar, Jacob	Locks, door	Dec. 12, 1854	II.
10486	Wiemer, Peter L	Hammers, steam	Jan. 31, 1854	II.
10727	Wells, David A. Wells, John Gaylord. (See Julius Herriett.)	Fibre, vegetable, the preparation of	April 4, 1854	III.
11310	Wells, Moses D	Brakes for light vehicles	July 11, 1854	X.
11538	Wells, Moses D	Rakes, horse	Aug. 15, 1854	I.
11736	Wells, Moses D	Washing machines	Sept. 26, 1854	XVII.
11768	Welsh, Joseph	Looms	Oct. 3, 1854	III.
10463	Werner, Carl E. Wesson, Daniel B., and H. Smith. (See Smith & Wesson.) Wesson, D. B., & H. Smith. (See Smith & Wesson.) Wesson, Daniel B., and H. Smith. (See Horace Smith.)	Distilling apparatus	Jan. 24, 1854	IV.
11626	West, Joseph D	Hydraulic ram	Aug. 29, 1854	XI.
11953	Westgate, Orson	Saw-gauge	Nov. 14, 1854	XIV.
11104	Westinghouse, George	Horse-power, endless chain	June 13, 1854	XIII.
11011	Westrup, Walter	Mills, grain	June 6, 1854; in England, Jan. 24, 1850.	XIII.
11143	Wethered, Charles E., John, and Samuel	Heating purposes, ordinary and superheated steam combined for.	June 20, 1854	V.
10874	Whalen, Seth. Wheeler, Artemas, and E. H. Graham. (See Edmund H. Graham, assignor.)	Hay knives	May 2, 1854	I.
10877	Wheeler, Clark	Bee-hives	May 9, 1854	I.
12044	Wheeler, Cyrenus, jr. Wheeler, Daniel G., and M. Shaw. (See Melvin Shaw, assignor.) Wheeler, Lyman, and A. Goodman. (See Goodman & Wheeler.)	Harvesters, grain and grass	Dec. 5, 1854	I.
11235	Wheeler, M. J., G. W. Rogers, H. W. Pierce, and M. B. Tidey.	Plane, bevelling	July 4, 1854	XIV.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
12012	Wheeler, William	Washing machines	Nov. 28, 1854	XVII.
11020	Whipple, James A	Pumps, mechanism for operating	June 6, 1854	XI.
	Whipple, Jonathan. (See Waley, assignor.)			
11189	Whipple, M. D. and L. W., assignors to L. W. Whipple and R. B. Fitts.	Printing upon glass, process of engraving or	June 27, 1854	XVIII.
	Whipple, Milton D	Cotton ginning: machine for cleaning wool from burs and other foreign matter.	Oct. 28, 1840; extended Oct. 24, 1854.	Extension.
	Whitcomb, N. C., *et al.* (See Newman, *et al.*)			
	Whitcomb, N. C., *et al.* (See Newman, *et al.*)			
	Whitcomb, *et al.* (See Newman, *et al.*)			
	White, Harrison G. O., *et al.* (See Washburn, *et al.*)			
	White, Henry J. (See Donovan, administrator, and Donovan, assignor.)			
10437	White, Lewis B	Trusses	Jan. 17, 1854	XX.
10488	White, LeRoy S	Casters, furniture	Jan. 31, 1854	XVII.
11657	White, LeRoy S., assignor to L. S. White, Lewis White, Lyman White, and A. G. Stevens.	Lamps, railway	Sep. 5, 1854	V.
11506	White, L. S., assignor to B. Lathrop and P. B. Tyler.	Casters, furniture	Aug. 8, 1854	XVII.
11540	White, William A	Printing long-napped fabrics, process for	Aug. 15, 1854	XVIII.
11149	White, Stephen, and H. C. Jones	Locks, pad	June 20, 1854	II.
11627	Whitehead, Jesse	Speeders, counter-twist	Aug. 29, 1854	III.
	Whiting, Jas. M., and George F. Wilson. (See Wilson & Whiting.)			
	Whiting, William. (See J. Marks, assignor.)			
	Whiting, William. (See Marks & Howarth.			
11579	Whiteley, Abner	Harvesters, grass, track cleaners to	Aug. 22, 1854	I.
11710	Whiteley, Abner	Harvesters, grain and grass	Sep. 19, 1854	I.
280	Whitmarsh, Samuel	Calorifiers	Aug. 17, 1852; reissued October 10, 1854.	Reissue.

11447	Whitney, Eli	Fire-arms	Aug. 1, 1854	XIX.
	Whitridge, S. H. (See John Wilcox.)			
11462	Whittall, J. W., and W. W. Pendleton	Hats, felt	Aug. 1, 1854	XXI.
11251	Wickersham, John B	Pavements, foundations for	July 11, 1854	IX.
10615	Wickersham, William	Sewing machines	Mar. 7, 1854	III.
11503	Wickersham, William	Irons, smoothing, self-heating	Aug. 8, 1854	XVII.
11708	Wicks, Loren J	Sawing machine, method of operating guide-rollers or feed-clamps in.	Sep. 19, 1854	XIV.
11102	Wightman, James	Boilers, steam	June 13, 1854	VI.
11580	Wilber, Philander	Presses, cheese	Aug. 22, 1854	XII.
10683	Wilbur, Alexander	Staves, jointing, machines for	Mar. 21, 1854	XIV.
10684	Wilbur, Alexander	Crozing machines	Mar. 21, 1854	XIV.
11769	Wilcox, John, and S. H. Whitridge	Sewing-needles	Oct. 3, 1854	III.
11655	Wild, George L	Musical stringed instruments	Sep. 5, 1854	XVIII.
10714	Wilder, R. A	Wheels, railroad car	Mar. 28, 1854	X.
11880	Wilder, R. A	Spark-arresters, for heating feed-water, arrangement in.	Oct. 31, 1854	VI.
11398	Willard, Simon	Bedsteads, portable	July 25, 1854	XVII.
11449	Willard, Simon	Bedsteads	Aug. 1, 1854	XVII.
	Williams, C. H. (See Bassett, assignor.)			
11397	Williams, Charles	Boxes, mode of fitting heads in	July 25, 1854	XIV.
11817	Williams, E. D., and T. Tyrrell	Brick-presses	Oct. 17, 1854	XV.
10526	Williams, Henry S	Steam, apparatus for controlling the pressure of	Feb. 14, 1854	VI.
11799	Williams, Irvin A	Lamp, locomotive	Oct. 10, 1854	V.
11713	Williams, John, assignor to F. Curtis & Co	Clocks, calendar	Sept. 19, 1854	VIII.
10873	Williams, Parley, 2d	Slotting-machine	May 2, 1854	XIV.
	Williams, S. G., and Aaron Palmer. (See Palmer & Williams.)			
11399	Willis, Daniel	Cooking and warming, apparatus for	July 25, 1854	V.
11881	Wilmot, S. R	Metre, water	Oct. 31, 1854	XI.
12116	Wilson, Allen B., assignor to W. P. N. Fitzgerald	Sewing-machines	Dec. 19, 1854	III.
11073	Wilson, Charles A	Valves, for steam-pumps, operating	June 13, 1854	VI.
11916	Wilson, Charles	Locks	Nov. 7, 1854	II.
11402	Wilson, D., assignor to W. F. Pratt, G. W. Bosworth, and H. M. Bird.	Stove-pipes, thimbles for	July 25, 1854	V.
11344	Wilson, G. F., and J. M. Whiting	Screws, threading, machines for	July 18, 1854; in England, April 4, 1854.	II.
10621	Wilson, Joseph	Railroad switches, self-acting	Mar. 7, 1854	IX.

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10417	Wilson, Stephen D.	Valves and valve-seats of steam-engines	Jan. 10, 1854	VI.
	Wilson, Wm. F., and E. H. Chambers. (See Spangler, assignor.)			
	Winans, Ross	Engines, steam, mode of regulating the waste steam in locomotive.	Nov. 26, 1840; extended Nov. 20, 1854.	Extension.
10901	Winans, Ross and Thomas	Locomotive fire-box	May 9, 1854	VI.
10971	Winans, Ross and Thomas	Locomotive tender	May 23, 1854; antedated May 9, 1854.	VI.
11144	Winchester, Joseph R.	Carriage tops, mode of raising and letting fall	June 20, 1854	X.
	Winsor, Charles F. (See Henry Richards.)			
12083	Winsor, Daniel L.	Windlasses, ships'	Dec. 12, 1854	XII.
11707	Winter, Archibald	Sawing fire-wood, machine for	Sept. 19, 1854	XIV.
11737	Wisner, Joel	Washing-machine	Sept. 26, 1854	XVII.
	Wissenger & Enoch. (See Enoch & Wissenger.)			
10682	Wolf, David and Herman	Planters, seed	Mar. 21, 1854	I.
10993	Wood, Brown S.	Knitting machines	June 6, 1854	III.
11103	Wood, G. W., and L. O. Webster	Gates, canal lock	June 13, 1854	IX.
11187	Woodbridge, W. E., assignor to Charles Humphrey.	Tops, whistling	June 27, 1854	XXII.
11504	Woodbury, H. E.	File or holder, document	Aug. 8, 1854	XVIII.
10512	Woodbury, J. A.	Planing machines	Feb. 7, 1854	XIV.
	Woodbury, J. A., and W. B. Merrill. (See Abstердam & Merrill, assignors.)			
	Woodbury, J. A. (See H. Snow, assignor.)			
11448	Woodman, Horace	Carding machines, cleaning top cards of	Aug. 1, 1854	III.
10606	Woodruff, Chauncey D.	Troughs, eaves, suspending	March 7, 1854	IX.
10527	Woodruff, Jacob D., and J. H. Butterworth	Bridges, drop	Feb. 14, 1854	IX.
11400	Woods, Leonard	Hedge trimmer	July 25, 1854	I.
	Woods, S. A., and S. S. Gray. (See S. S. Gray, assignor.)			
11882	Woodward, A. S., and B. F. Bartlett	Paper, machinery for cutting rags for making	Oct. 31, 1854	III.

11309	Woodward, Thomas B.	Mills, for grinding	July 11, 1854	XIII.
11800	Woodward, Thomas B.	Smut machines	Oct. 10, 1854	XIII.
11985	Woodward, Stephen, assignor to S. Woodward, J. P. Nelson, and A. C. Carroll.	Clothes, apparatus for drying	Nov. 21, 1854	XVII.
12016	Woodworth, Arad, 3d, and George Chamberlain	Rope and cordage, machinery for making	Nov. 28, 1854	III.
10900	Woolman, Enoch	Hinges, inclined plane, arrangement of friction-roller in.	May 9, 1854	II.
11801	Woolsey, Edward J.	Sugar boilers, construction of	Oct. 10, 1854	IV.
11628	Woolten, John	Nail machines	Aug. 29, 1854	II.
11635	Worrall, Thomas, assignor to Mifflin Paul	Plane, multiform moulding	Aug. 29, 1854	XIV.
11541	Wright, A. S	Gold amalgamator	Aug. 15, 1854	II.
11846	Wright, Benjamin H.	Engines, rotary steam	Oct. 24, 1854	VI.
11279	Wright, George	Spinning, self-acting mules for	July 11, 1854	III.
10970	Wright, Robert L.	Tire-bending machines	May 23, 1854	II.
11917	Wright, Wendell	Fire-arms	Nov. 7, 1854	XIX.
12111	Wright, Wendell	Bed, spring bottom	Dec. 19, 1854	XVII.
10398	Wright, William	Valves, cut-off, of steam-engines, operating	Jan. 3, 1854	VI.
10618	Wright, William C	Stone, machines for drilling	Mar. 7, 1854	XV.
11145	Wright, William C	Cloth, folding and measuring	June 20, 1854	III.
12082	Wyatt, Charles W.	Felloes, machine for dressing	Dec. 12, 1854	XIV.
10528	Wyckoff, A.	Chains, jack, making links of, machines for	Feb. 14, 1854	II.
10376	Xander, G. A.	Corn-shellers	Jan. 3, 1854	I.
10584	Yale, Linus	Locks, bank	Feb. 28, 1854	II.
11818	Yandell, John, and J. H. Johnson	Bridge, iron	Oct. 17, 1854	IX.
11100	Yates, George, and Eli Clayton	Looms	June 13, 1854	III.
11918	Yeaman, S. M., deceased	Straw-cutters	Nov. 7, 1854	I.
10843	Young, Amos	Boats, canal, method of discharging cargo from	May 2, 1854	VII.
	Young, Elias, and F. Heller. (See Heller & Young.)			
11236	Young, Jerome B.	Bells, mode of hanging	July 4, 1854	XXII.
10617	Young, Jesse	Air-heating pipes, connecting the joints of.	Mar. 7, 1854	V.
	Young, Jos., and J. G. Snyder. (See Snyder & Young.)			
11401	Zeigler, Daniel	Mills, cider	July 25, 1854	XIII.
616	Zenner, Charles, assignor to M. Greenwood & Co.	Foot-stool, or ottoman, frame of a	Jan. 3, 1854	Design.
617	Zenner, Charles, assignor to M. Greenwood & Co.	Foot-stool, or ottoman, frame of a	Jan. 3, 1854	Design.
621	Zenner, Charles, assignor to M. Greenwood & Co.	Shovel and tongs stand	Jan. 24, 1854	Design.
622	Zenner, Charles, assignor to M. Greenwood & Co.	Shovel and tongs stand	Jan. 24, 1854	Design.
	Zern & Schuyler. (See Schuyler & Zern.)			

Alphabetical List of Patentees—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
10558	Zink, John	Grain, threshers and separators of	Feb. 21, 1854	I.
	Zoiner & Harris. (See C. Harris and P. W. Zoiner.)			
	Zoiner & Harris. (See C. Harris and P. W. Zoiner.)			
	Zoiner & Harris. (See C. Harris and P. W. Zoiner.)			
	Zoiner & Harris. (See C. Harris and P. W. Zoiner.)			
10585	Zook, Jacob	Lathes, carrier for	Feb. 28, 1854	XIV.

DESCRIPTIONS AND CLAIMS OF PATENTS,

ISSUED IN THE YEAR 1854.

ILLUSTRATED WITH ENGRAVINGS.

No. 10,358.—A. C. Cook.—*Improved machines for Sawing Bevel Surfaces.*—Patented January 3, 1854.

This invention consists in so arranging in a frame a circular saw J^1, a moveable carriage I, a segmental gauge-plate H, and gnomon G, that, by adjusting these several parts, any required bevel is sawed, as the carriage I passes the saw.

Claim.—The employment, in the manner herein described, of an adjustable, swinging, bevel-gauging platform, provided with a sliding carriage I, which has adjustable guide rails *l l*, and adjustable heel and side rest J^2 and L, and pointer G, in combination with an index plate H and cutter J^1,—the whole being constructed, arranged, and operating in the manner and for the purpose herein described.

No. 10,359.—Samuel and Thomas Champion.—*Improvement in Feathering Paddle-Wheels.*—Patented January 3, 1854.

The improvement consists in the arm of the paddle E being continued through the hub or wheel shaft D, instead of terminating at the hub, or, that when the one paddle is feathered in the water, the other at the opposite end of the shaft is placed in that position which offers the least resistance to its passage through the air, or *vice versa;* and in the cam frame H, G, for reversing the paddles C, which is done by means of the cam-faces G acting against the oblong projections *i i*.

No. 10,360.—Isaac Crandal.—*Improvement in Running Gear of Wagons.*—Patented January 3,1854.

The improvement consists in a combination of the ordinary fixed perch, or reach, with a spring reach, so that all the solidity of the former is obtained with the advantages of the latter, yet avoiding any weakness of construction.

The drawing represents the spring, &c., in action when the vehicle is turning.

Claim.—The arrangement of the spring-bar (or partial reach) F, furnished with a slot G, the bar *h*, connecting the sand-bar *c* and upper sway-bar *k*, in which is inserted the pin *g*, in combination with the ordinary reach, or perch, and running-gear of wagons, for the purpose of not only giving direction and steadiness of the tongue under all circumstances, but also preserving the set of the axle at the same time, as set forth and shown.

No. 10,361.—JOHN COLLMANN.—*Ruling Machine.*—Patented January 3, 1854.

This is an improvement in machines for ruling parallel lines upon copper-plates and other surfaces, and has for its object the moving laterally of the way upon which the ruling carriage runs. It consists in moving the box to which the way is attached along a bar passing through it, by the action of a cam working against a plate alternately sliding upon and secured to the traversing bar; the operation being performed by means of a lever fastened to the cam, the movement of which is regulated by an adjustable stop, thus limiting the advance of the box, and regulating the distance between the lines.

Fig. 1 is a top view of the box with the cover removed.

Fig. 2 is a vertical section.

The claims are to the case *d*, alternately sliding upon and secured to the bar *c*, as specified, in combination with the cam *m*, lever *l*, spring *f*, and stop *n*, arranged and operating as described for moving the box *a* upon the traversing bar *c*, any required distance, substantially as and for the purpose herein fully set forth.

No. 10,362.—WILLIAM S. DILLEHAY.—*Straw Cutter.*—Patented January 3, 1854.

This invention consists in the horizontal double-edged cutter knife D, in combination with the moveable discharge scraper E.

No. 10,363.—JOHN DONLEVY.—*Method of forming Plates for Polychromatic Printing.*—Patented January 3, 1854.

The claims are for a method of producing intagliographic printing and other plates from forms of types, by surrounding the types whilst in contact with a glass plate, or its equivalent, with plaster of Paris, or some equivalent therefor, so that when set the surface of the plaster will be on the same plane with the surface of the types, and then stereotyping the form of types thus surrounded.

Also, for the method of producing embossing plates by taking a cast in plaster from an intagliographic plate, and then stereotyping such plaster cast, thus producing a reverse duplicate in relief.

Also, the method described of producing what are called illuminated printing plates for printing shaded intagliographic letters, characters, or figures, by producing an intagliographic plate in accordance with the

first part of the invention from a form of shaded types, and then removing the plaster from the form of types, so that, after printing in intaglio with the intagliographic plate, the shadows can be printed, either with the form of types after the plaster has been removed, or with a stereotype taken from it.

And finally, producing polychromatic printing plates from an intagliographic plate by taking a cast therefrom in relief, and from such relief obtaining what is termed a stencil plate or plates, from which the plate is obtained, to have the letters or figures, in whole or in part, in duplicate of the intagliographic letters, &c., and in relief.

No. 10,364.—F. P. DIMPFEL.—*Steam Boiler Furnaces.*—Patented January 3d, 1854.

This improvement consists in lining the tin box or furnace with water tubes *d*, connected at the top and bottom with water spaces *e* and *f*, and the grate *a* so arranged that a full and complete circulation of water is produced. The figure represents a vertical section through the boiler and fire-place.

No. 10,365.—JAMES HAMILTON.—*Improvement in Quartz-Crushing Machines.*—Patented January 3d, 1854.

The invention is an improvement on the ordinary roller or cylindrical pestle working in a concave, which is disclaimed.

The drawing represents a vertical section.

Claim.—The means herein described and shown for cracking and grinding metallic ores, consisting of the cylindrical pestle *d*, provided with grooves in its upper part to crack the lumps of ore, and set on a shaft *c*, on which it has a partial rotary motion, and operating in connection with the basin *a*, in which said pestle moves to grind the ore into powder by the gradual approach of the sides of said basin to the cylindrical pestle, said pestle being also provided with a scraper or agitator *5* in its lower surface.

No. 10,366.—MICHAEL W. HELTON.—*Improved method of operating two Saw-Gates by one Pitman.*—Patented January 3d, 1854.

The object of this invention is to relieve the pitman of all strain due to the weight of the gates, and is thus effected: upon the two pivots *k* and *f* rock two levers J and M, to whose extremities friction wheels L and N are attached. The bifurcated pitman I is hinged at *i i* to the lower lever, and confined by a wrist at Q to a crank, upon a shaft, to which motion is imparted by a band over a drum *s*. It is evident that the two gates E will thus receive a reciprocating rectilinear motion, and that the pitman receives no strain from them. A pendulum motion of the pitman may effect the same result.

The claim is for driving a pair of saw-gates, the saws of which operate on the same log, by means of a bifurcated pitman hinged to the

rocking cross-beam by its two arms, and connected by a wrist upon its other end with the crank of the driving shaft; by which means a conical gyratory motion is imparted to the pitman, for the purpose and substantially in the manner described.

No. 10,367.—GEORGE D. MILLER.—*Tuyere.*—Patented January 3, 1854.

The improvement consists in the notched segment of cylinder *f*, as arranged in relation to the passages *c*, *d*, and *b*, that the blast may be directed, graduated, to one or other of the egress-passages *c* and *d*.

No. 10,368.—LUCIUS PAIGE.—*Improvement in Screws and Nuts.*—Patented January 3d, 1854.

This improvement consists in connecting to the nut B a spring-pawl C, which catches into the other threads of the screw, and thus prevents the nuts from being jarred off; and in having the pawl so attached to the nut that the application of the wrench liberates it from the toothed thread.

The claims are to the forming of the helical thread of a male screw with notches or teeth, as specified, in combination with applying to its screw-nut a dog-catch or spring-pawl, to operate in the said teeth or notches, and prevent back rotation of the nut on the screw, substantially as above set forth.

Also, to the improvement of so applying the catch-lever, or dog, or catch to the nut, that it may project beyond one prismatic side of the nut; so that when a wrench is applied to such side of the nut and its opposite side, it may press inwards the dog or catch, or lever thereof, or so act upon the same as to throw such dog or catch out of engagement with the teeth or notches of the male screw, so as to allow the nut to be unscrewed from the same, substantially as specified.

No. 10,369.—JONATHAN RUSSELL.—*Improved machine for cutting Irregular Forms.*—Patented January 3, 1854.

The peculiarities of this machine consist in so combining the spur-wheel *f*, on the mandrel *g*, (which carries the pattern,) and the spur-wheels f^1 f^2, on the mandrels g^1 g^2, (which carry the rough material,) with the main wheel *e*, for turning them through their respective carriages, that the carriage G may have a uniform longitudinal motion relatively to the carriage H, for the purpose of cutting to the same or to a greater or less size than the pattern. Also, in so hanging the tracers *u u* in independent frames, working within the frames W W, which carry the cutters T T, as to allow the cutters to reduce the rough material to the same or to a greater or less size than the pattern, in its transverse direction. And also in giving to the pattern H^1 and the rough material (between g^1 and g^2, and J J) a half or less than a *half revolution,* at each traversing motion of the carriages G and H,

for the purpose of reducing or cutting in longitudinal sections, without revolving the pattern or the rough material. The drawing presents a side view of the machine, showing only one tracer *u* and one set of cutters T, the other tracer and the other set of cutters being behind them.

No. 10,370.—MATHEW STEWART.—*Floor Plates for Malt Kilns.*—Patented January 3d, 1854.

The device consists of a peculiar construction of the floor in small square sections of perforated sheet iron, having their edges *b b* bent down at right angles to the horizontal part B of the body of each square. Under the place where the four corners of any four squares meet is a stanchion C, with cross-slots for the resting of each of the four corners of the plates, and the bent-down edges are received in the cross-slots to hold them all in their proper places.

No. 10,371.—EDWARD A. TUTTLE.—*Hot-air Register.*—Patented January 3d, 1854.

The inventor does not claim the rack-and-pinion movement, or the crown-wheel and segment; but what is claimed is the improvement upon William Fenton's Patent Register, which consists in the improved method of maintaining the connecting rod in its proper position, substantially as described, namely: at the bottom, by a prong or prongs of the rod inserted into and working in cast raised openings on the fans or valves, and at the top by a slot or otherwise in the register front, together with the slide plate *p*, by which arrangement the register is greatly simplified and cheapened in its cost.

No. 10,372.—JOHN B. TERRY.—*Pin Machines.*—Patented January 3, 1854.

This machine consists in a circular guard *e i* and circular slide 10, combined with the wheel *e* and spring f^2, for bringing the pins from the conductor and dropping them in the sticking channels.

No. 10,373.—ZINA S. OGDEN, assignor to LEWIS C. OGDEN.—*Improvement in Lowering, Raising, and Fastening Carriage-Tops.*—Patented January 3d, 1854.

This improvement is to be applied to carriage-tops without joints in the bows. The top is secured to the shaft *a*, which moves up and down in slots in the sides of the vehicle. A lever *e* moves the shaft *c* and its eccentric hooks *d*, which depress the shaft *a*, and lock the top when it is raised. The fixed pins or bolts, *ff*, serve to hold the top steady while raised.

Claim.—The application of the lever, the shafts, the eccentric circle-hooks, and the two bolts to lower, raise, and fasten carriage-tops with stationary bows.

No. 10,374.—D. H. CHAMBERLAIN, assignor to CHAMBERLAIN & HUNT.—*Banding Pulleys for Driving Saws.*—Patented January 3d, 1854.

The claims are: 1st. The arrangement of pulleys and endless belt, whereby the driven pulley is sustained on the periphery of the driving wheel or pulley; the same consisting in placing the peripheries of the two lesser pulleys in contact with the periphery of the driving-wheel, so as to extend beyond the side thereof, and running the endless belt around the extensions of the said two pulleys, and down by the side of the driving-wheel, and without any pressure or contact with its periphery. 2d. To the combination of two endless belts, arranged on opposite sides of the driving-wheel, with the bearing and belt-pulleys, or their equivalents, and the driving-wheel, as made to operate together; the same enabling to relieve the bearings of the shafts of the several pulleys from the contractile strain of the belts. 3d. To the improvement of arranging two or more endless belts on one side of the driving-wheel, and not only running all of the said belts around one shaft or drum, or the equivalent, supported on the periphery of the driving-wheel, but respectively around other shafts or drums, or equivalents, arranged and supported on the opposite portions of the periphery thereof; the whole being as exhibited in fig. 3.

No. 10,375.—JAMES H. LONGBOTHAM.—*Improved Machine for Drying Bookbinders' Boards.*—Patented January 3, 1854.

This invention consists in making a close chamber, and arranging around the sides of it a series of steam, hot air, or gas pipes. Also, in arranging in one end of the drying-chamber a revolving fan, surrounded by hot air, steam, or gas pipes. The hot air is forced into the drying-chamber by the fan, producing a circulation of hot air throughout the chamber, to dry the boards as they are carried from end to end on endless bands.

The claim is to the use of the drying-box or chamber; endless belts for carrying the paper boards; coil of pipes arranged therein; in combination with a blower and case, having a series of coils of pipes therein for rarifying currents of air for drying bookbinders' paper boards, and other substances, substantially as hereinbefore set forth.

No. 10,376.—GEORGE A. XANDER.—*Corn-Sheller.*—Patented January 3, 1854.

This invention is the combination of a spring *c*, to which the hopper *x* is attached, with a convex disk A; affording a special facility in feeding in, with the usual advantages of disk shellers. The inventor says: I claim the improvement on the cylinder disk—that is, its oval shape, the spring being attached to the side. I would further state, that by riveting two half cylinders together, the cylinder may as readily be constructed double; and I do therefore not limit my claim merely to the single, but also the double cylinder.

No. 10,377.—CHARLES MÜLLER.—*Improvement in Machines for Casting Type.*—Patented January 3, 1854.

Fig. 1 is a perspective view of the machine.

Fig. 2, a plan of a detached part.

Fig. 3, a side view of the lever for tilting the matrix.

The claims are for suspending the mould below its axis of oscillation, whereby its tendency towards its centre of gravity will act in opposition to the momentum required in its movement towards and from the mould, and its movement and degree of opening can thus be reduced.

Also, the combination of a cam H, lever I, rod J, lever K, and rod L, for the purpose of opening and closing the mould.

Also, tilting the matrix by means of the lever N attached to the oscillating mould arm, combined with the lever M, which receives an oscillating motion from the arm or lever by which the oscillating motion is given to the shaft or axis upon which the mould oscillates.

No. 10,378.—WILLIAM H. PRICE.—*Improvement in Bedstead Fastenings.*—Patented January 3, 1854.

C is a metallic plate or casting attached to the rail, and provided with a tenon E, and with a dovetailed projection D, which last takes into another dovetailed projection B, on the plate A, attached to the post. The tenon E is formed with its end parallel to the dovetail, so that it can fill the mortise in the post and tenon as the rail is let down to bring the dovetails into action.

The claim is to the arrangement of the tenon, mortise, and wedge, in such a manner that the wedge will begin to act before the tenon is inserted in the mortise, and draw it gradually into said mortise, so as to completely close it when the fastening becomes firm, for the purpose of excluding vermin, and for other purposes.

No. 10,379.—PHILIP P. TAPLEY.—*Improvement in Machines for Polishing Leather.*—Patented January 3, 1854.

In this machine, the swing-beam B, which carries the rubber at its lower end, and is operated by a connecting-rod K and crank *m*, is jointed a little way above the rubber; and the lower jointed part Q is governed by a secondary connecting-rod O, pivoted to a stud *a*, which is fastened into the connecting-rod K. While the crank-line *m* is in the upper half of its revolution during the return motion of the swing-beam, the part Q is drawn aside—as shown in the drawing—so as to throw the rubber out of action; but as the crank-pin descends into the lower half of its revolution, the part Q is thrown back into a straight line with B, and the rubber brought into contact with the leather on the table G, which is thus rubbed only in one direction, To provide for the excess of motion after the point where Q is brought into a straight line with B, the connecting-rod O is jointed in the middle, and its thrust kept up by the spring W attached to the connecting-rod K.

The claim is to the above-described combination and arrangement of the crank-wheel, the connecting-rod K, the swing-bar B, the lever Q, and the connecting-rod O; and also to the improvement of making the connecting-rod OO in two parts, jointed together, and to operate as specified, whereby the contact of the dicing or polishing ball or surface with the leather is prolonged under circumstances as stated.

No. 10,380.—WILLIAM B. TILTON.—*Improvement in Guitars.*—Patented January 3, 1854.

The claim is to the depressing of the strings of guitars slightly below the bridge, by passing them through perforations in the ordinary pins or pegs *h*, or by any means substantially the same, when the strings are fastened at the foot *d* of the instrument, for causing the bridge to act as a fulcrum, in producing the tension of the strings, and so relieving the sound-board as to give the instrument a richer, fuller, and more complete tone.

No. 10,381.—CLAUDE DESBAUX.—*Apparatus for Turning the Leaves of Books.*—Patented January 3, 1854.

Fig. 1 is an elevation of a music-stand, with the "turn-page" attached.
Fig. 2, metal disks to clasp the leaves of books.

The invention consists in mechanically turning the leaves of music and other books, by means of a magnet D, in the arm, operated by the pedal E, and metal disks or clasps attached to the leaves of books.

The book being placed on the stand, the metal disks, fig. 2, are attached to its leaves on the right side; then, by means of a cord b^2, which is passed round a pulley, c^1, the magnet on the end of the arm *c* is made to turn over from the left side, where it is represented in the drawing, to the right side of the book, by means of the pedal E, where it seizes one of the metal disks, and is carried back to its original position by the spring *a*; in its passage the magnet slides from the disk, is disengaged from the leaf of the book, and is ready to operate again.

No. 10,382.—JOHN SHUTTLEWORTH.—*Improvement in Power Looms.*—Patented January 3, 1854.

The improvement consists in a combination of devices for regulating the movement of the treadles, to adapt them to the formation of any desired figure of the design to be woven, and in the mode of effecting the movement of the picker-bars.

The claims are—

1st. To the connecting rod I and lever H, in combination with the reciprocating frame L, for the purpose of giving a reciprocating motion, and a rocking motion to the shaft G.

2d. To the rocking shaft G, arm F, the vibrating lever N, and arms B and T, in combination with the reciprocating frame L, for the purpose of giving an intermittent rotary motion to the wheel E and disks A.

3d. To the discs A, in combination with the horizontal sliding stops D, for the purpose of forcing out and drawing in said stops, in the manner described; and also for the purpose of operating the picker-bar O.

No. 10,383.—JOSEPH NASON.—*Screw-cutting Machine.*—Patented January 3, 1854.

This consists—

1st. In constructing and combining the stud *f* with the tube *g* and guide-screw *j*, by which guide-screws of the various patterns used in screw-cutting may be put on or taken off expeditiously.

2d. In the mode of constructing tool-bearer *o*, particularly as relates to placing the slide-rest *q* behind the work.

3d. The construction of the tool-lifter a^1, for withdrawing the tool from the work.

4th. Combination of the guide-screw *j*, the threaded block *n*, and the tool-bearer *o*, with the shaft, for giving the proper transverse motion to the cutting-tool, and releasing the block from the guide, and removing the tool from the work.

No. 10,384.—SILSBY & HINE—*Hay and Manure Fork.*—Patented January 3d, 1854.

A method of fastening the unwelded part of the shank, or the portion where the tang unites with the shank, giving to such tang a semicircular bearing upon the socket piece.

No. 10,385.—J. B. TERRY, assignee of HARVEY.—*Pin Machine.*—Patented January 3d, 1854.

The improvement consists in the slide 20, for taking one row of pins from the conductors *i*, and delivering them to the forceps *o*, for sticking them. The claim is, to allowing one pin at a time to pass down the conductors by means of a vibrating slide, or its equivalent, so as to supply one row of pins at a time by the conductors to the forceps.

No. 10,386.—SHERBURN C. BLODGETT.—*Improvement in Hemming and Cording Umbrellas.*—Patented January 3d, 1854.

This invention consists in the use of a guide for cording and hemming umbrella covers. There is a curved slot, which folds the hem around the cord, and a hole through which the cord is passed. It is to be used alone, or attached to a sewing machine. Figure 1 represents a perspective view of the guide; figure 2 is a top view, on an enlarged scale.

The claim is, to the guide for cording or hemming umbrella covers, arranged upon a stand with a curved slot to fold the hem around the cord, and a hole through which the cord is passed to its place. This

is claimed, whether the guide be used alone or attached to a sewing machine.

No. 10,387.—PATRICK CLARK.—*Controlling and Regulating the Combustion of Fuel used in Steam-boilers.*—Patented January 3d, 1854.

An elastic diaphragm E, within a cylinder B, the space D, underneath it, communicating with the steam in the boiler, and having above it a piston F, which, through the pressure of the steam upon the diaphragm E, is made to operate the damper L of the smoke-stack, and thus regulate the combustion of the fuel.

No. 10,388.—R. H. COLLYER.—*Gold Separator.*—Patented January 3d, 1854.

This improvement relates to the arrangement of the cylinder A, curved basin B, vibrating arm D, connecting rod C, and power wheel attached to it; by which arrangement the cylinder is operated as a pulverizer and triturater without a fixed shaft.

No. 10,389.—THOMAS ENGELBRECHT.—*Spring Hinges.*—Patented January 3, 1854.

This improvement relates to the combination of the two independent spindles, *c c*, having right and left graduated slots, *e e*, in their sides, and against the stops of which the pins *f*, passing through the barrel of the hinge, act to operate alternately either of the springs D attached to the spindles, as the door is opened outwards or inwards, with the barrel of the hinge having flanges at the opposite side of the barrel.

No. 10,390.—BANFORD GILBERT.—*Corn-sheller.*—Patented January 3, 1854.

The invention consists in a combination of the arrangement of the teeth on the periphery of the shelling cylinder B, as compared with their arrangement on the concave bed C, each set being in curved rows, and curved each contrary to the others, as they meet heads to heads.

No. 10,391.—J. DURELL GREENE.—*Improvements in Breech-Loading Fire-arms.*—Patented January 3, 1854.

The breech B is partially rotated by means of the handle F, in the chamber D, which moves on trunnions *a*, in the slots *b*. The breech is secured to the chamber by the sectional screw on its rear end *d*. When in proper position for closing, the rotation causes the screw portions to engage and press the breech against the barrel.

Fig. 1 represents a section of the piece when closed.

Fig. 2, a view when the breech is open for loading.

The sectional screw of Benjamin Chambers, which is on the end of the breech and fastens it to the barrel, is disclaimed.

The claim is to the combination of the movable breech with the revolving chamber D, when the two are connected together by means of the divided screws.

No. 10,392.—JAMES B. HOLMES.—*Improved Method of Nailing Wash-boards.*—Patented January 3d, 1854.

This invention consists in an arrangement of mechanism to apply percussion force, positively, to drive home all the nails at one blow of the two hammers *m*. The two sides *e e* are nailed to the piece *s*, at one blow, thus:—By a suitable mechanism the pulleys 1, 3, and 4, raise the slide *p* up to the guide *o*; the two rods *q* will thus bring the hammers quietly against the two bars *k*, which force the drivers *l*, through holes in the fixed nail-holders *g*, into the sides and bottom *e e* and *s*. The friction pulley 4, run by a band on the opposite end of its axle, is caused to impinge against the pulleys 1^1 and 3^1 alternately, by moving to the right or to the left lever 3; and two cords are made to raise or depress the slide *p* quickly, which of course operates the hammers.

The claim is to the operating the hammers by a positive percussion force, by means of the mechanism described.

No. 10,393.—SAMUEL MALONE.—*Corn-Planter.*—Patented January 3d, 1854.

The gist of the invention consists in the construction of a planter valve K, made reversible from end to end, so that the same valve piece can do different kinds of work by reversing it, for the purpose of varying the quantity of seed planted.

No. 10,394.—GEORGE F. PAGE.—*Improvement in ratched Catch for Head in Sawmills, &c.*—Patented January 3d, 1854.

This improvement consists in so combining a spring latch and catch with a double or escapement pawl, as to greatly facilitate reverse movements.

The tooth *i* on the spring latch *h* keeps the pawl *g* in place; and by rocking the lever *c* about the axle of the pinion *c*, the head block *a* will move to the right or left, according to the position of the tooth *i*: if above the catch *k*, the block will move to the left; if below, to the right. The pawl may be easily shifted into either of the two positions.

The claim is to the combination of the latch, catch, and escapement pawl, for the purposes set forth.

No. 10,395.—THOMAS ROGERS.—*Machines for cutting mouldings and caps of Hand-rails.*—Patented January 3d, 1854.

This invention consists in so arranging the knives T and P upon the mandrel or shaft R R, connected by a universal joint within box O, so

that this shaft R R may revolve in either direction, as may be required by the direction of the grain of the wood, to "cut with the grain."

The knives are fitted to the shafts in pairs, and so connected that when the shaft revolves in one direction, one of each pair is cutting, the others not, and *vice versa*.

The material is fed by hand; under these cutters are friction-rollers, H H L, Y Y Q.

The claim is to the combination of self-adjusting cutters (reversible in motion when required) with the jointed shaft, and devices for driving the same, as specified.

No. 10,396.—NICHOLSON AND SPRATT.—*Sealing Preserve-cans.*—Patented January 3, 1854.

The invention consists in a device for closing the mouth of a can *c c*. A is the section of a cylinder or barrel of an exhaust pump, with a wire *h* crossing its bottom—an india rubber disk *b* fitting the inside of the barrel, but underneath the cross wire, and lying over the mouth *a* of the can. The wire holds the rubber disk in place, while the pump is exhausting air from the can. The disk, as the exhaustion goes on, presses close upon the mouth of the can, and secures the exhaustion as fast as made.

No. 10,397.—OREN STODDARD.—*Improvement in Cross-cut Sawing Machines.*—Patented January 3, 1854.

This invention consists in arranging machinery so that by turning the crank 3 (fig. 1) the saw descends, cuts through the log, is again raised, and, while being raised, the log is led forward the required length and stopped, when the saw at once descends as before. The pitman *f* rocks the lever *g*, about pin 4, and this rocks the elbow lever *o* about pin 8; the dog 9 takes into a ratchet in the sliding-frame *m*, and thus elevates the saw periodically, by rocking the elbow lever *o*. When sufficiently elevated, the dog disengages itself, and the saw drops in consequence of the end of the log coming against a lever *t*, thereby throwing out the latch *v*, and allowing the saw to drop upon the log. At this moment the feed of the log is arrested by the pawl 18 being thrown out by means of the lever 2 (figure 2) and the string attached to the end of the brace 23.

The claims are, 1st. To the means herein set forth for elevating the saw when it has cut through the log, by means of the ratchet pawl lever *o*, and parts attached in combination with the retaining-latch *v*, operated upon by the log when it has been forced forward the required amount to disengage said latch, and allow the saw to operate on the log, as set forth. 2d. To forcing the log along the required amount for each section to be sawed off, by means of the roller operated on by the lever and pawl 18, when said pawl is brought into action by the lever *r*, as specified.

No. 10,398.—WILLIAM WRIGHT.—*Self-adjusting Cut-off.*—Patented January 3, 1854.

The employment of a rotary concentric hub *t*, on which the toes of the lifters rest when the valves are closed, combined with a cam c^1, connected therewith, and which turns excentrically thereon, for the purpose of opening and closing the valves, and regulating the period of closing the same. Also, combining with the hub *t* and cam c^1 the slide within them, and resting on an oblique groove *y* within the cam c^1 and the straight slot *u* in the hub, to determine the period of closing the valve.

No. 10,399.—DAVID CLARK.—*Improvement in Oil-Cups for Steam Engines.*—Patented January 10, 1854.

This invention consists in having a conical valve seat at the upper end of the cup-tube connecting with the steam-chest, and a like seat to the lower end of the tube, to which seats are adapted conical valves upon opposite ends of a stem or rod playing within the tube. The pressure of the steam and the weight of the valves and steam alternately opening and closing the one and the other valves, and thus giving an intermittent flow of oil to the steam-chest.

The claim is, to constructing the oil-cup in the manner described, or in any other equivalent thereto, so that the flow of the oil from the chamber A into and from the chamber B may be regulated wholly by the agency of steam and gravity, as set forth.

No. 10,400.—LUCIAN A. BROWN and JEREMIAH W. BROWN.—*Improved Press for Veneering.*—Patented January 10, 1854.

The improvements consist in a flexible caul, or covering *g*, formed of copper, or other metal possessing sufficient elasticity to yield to some extent to the pressure required to be exerted upon it, and also such a degree of tenacity as to take out the curls that may be found in almost all veneers, combined with a box B, having flexible sides *c*, flanges *e*, a water-trough *d*, and frames or posts *a b*. The inventors employ steam and an air-pump in conducting the operation. The air-pump is used to press the glued veneer more closely against the substance to which it is to be united.

They do not claim the method of setting or pressing a veneer down on a surface by the pressure of water upon an elastic material, or the employment of heat for this purpose through such material; but they claim "the employment, in the manner set forth, of a thin metallic plate, or caul, not only having the property of flexibility, but that of sufficient tenacity to take out the curls, in manner and under the circumstances above stated." Also, "the combination of a flexible metallic caul with a box having flexible sides." Also, "the combination of the water-trough *d* and flange *e* with the flexible sides *c*, and frames or posts *a b*, of the box B.

No. 10,401.—LEONARD CAMPBELL.—*Improvement in Cotton Gins.*—Patented January 10, 1854.

The invention consists in the employment of a peculiarly constructed concave placed between the saws and revolving brush; this concave has a series of slots for the saws to run in, and the sides of these slots are covered with bristles, which aid in separating such portions of the leaf as may have passed through the saws from the fibre. The lower edge of the concave has a row of bristles on it, which serves in some degree to straighten the fibre as it is taken away by the revolving brush.

The claims are, 1st. To the concave brush-ribs F and concave brush M, in combination with the brush-wheel E, for the purpose of scouring the nap (which is formed by the ginning-bars) out of the cotton, and at the same time removing all impurities or foreign substances from it. Said ribs F are each of them provided with two rows of short stumpy bristles, which are secured on the inner edges of said ribs." 2d. "To the concave plate G, for the purpose of regulating the current of air which passes between said plate and the wheel C.

No. 10,402.—DANIEL S. DARLING.—*Improvement to prevent dust from entering Railroad Cars.*—Patented January 10, 1854.

The claims are: To the arrangement of "a series of deflectors along the sides of the locomotive, and entire train of cars, in such a manner that a series of funnel-shaped chambers will be formed, which run into each other and form a continuous channel for the dust and air under the car to be confined in, while the funnel-shaped mouths at the front of the locomotive receive a powerful outside pressure of air, which, by the position of the deflectors, is forced into less than its ordinary space, and causes an extraordinary suction-current under the train, which concentrates and carries the dust arising from the wheels with it into the artificial channel under the cars, and confines it until it escapes at the end of the train; the open mouths of the deflectors on the sides of the cars also serving as channels for any side-dust which may come in contact with them to be sucked through into the central channel."

Also to the manner shown in the drawings of reversing the deflectors, so that they will effect the desired object in whatever direction the train is going.

No. 10,403.—D. M. CUMMINGS.—*Improvement in machinery for Mortising Window-Blinds.*—Patented January 10, 1854.

Fig. 1 presents a front elevation of the machine, in which A represents the driving-shaft; B, a bar extending across the frame of the machine; C, a movable platform; D, the sill of the frame; G G, the ways; and H the guage to which the stile must be attached for mortising. The inventor claims "the movable platform C, spacing guage H, oblique ways G G, when combined and arranged with each other, and *with the adjustable* guage-bits H H', &c., or their equivalents, in such

a manner that the mortises formed will be exactly equi-distant from each other, and also in such a manner that any desired degree of inclination may be given to the said mortises—disclaiming the use of the said movable platform C, save when employed in combination with the said spacing-guage and oblique ways, as above set forth."

No. 10,404.—CHARLES W. FILLMORE.—*Improvement in Clamps for holding steel plates to prevent them from warping during the operation of hardening and tempering.*—Patented January 10, 1854.

This improvement consists in making the ribs of the clamping-plates wedge-shaped; thick exteriorly, and thin where they come in contact with the steel plates undergoing hardening.

No. 10,405.—E. C. GOFFIN, assignor to A. B. ELY.—*Improvement in securing doors of Bank vaults amd Safes.*—Patented January 10, 1854.

This improvement consists in having the cross-bars B, which cover the key-hole, fitted into grooves D D; the surface of bar and groove being even and smooth, for strengthening and fortifying the doors, and protecting the vault and safe-lock from burglars.

No. 10,406.—BENJAMIN D. GULLETT.—*Improvement in Cotton-gins.*—Patented January 10, 1854.

This invention consists in adding to the usual saws and brushes of a cotton-gin a series of supplementary brushes, so placed that as the cotton is drawn from the seed by the saws through the ribs of the gin, it will also be compelled to pass through and be a time in contact with the additional brushes, which will aid in separating the impurities.

The claim is to the combination of the mote brushes, arranged and operating in the manner herein described, with the saw and stripping brushes.

No. 10,407.—HALVOR HALVORSON.—*Improvement in Machines for Pegging boots and shoes.*—Patented January 10, 1854.

In this machine the shoe is fixed upon a carriage, which, by means of slides, combines a longitudinal, a lateral, and a vertical motion, keeping its parallelism in all these motions. The lateral and vertical motions are each governed by fixed, waved, or cam surfaces, which, as the carriage travels along, are traversed by projections from the lateral and vertical slides, so as to keep the edge of the sole always properly presented to the awl and peg-driver, which occupy a fixed point.

The longitudinal motion of the carriage is produced by a long screw connected with the mechanism for driving the peg.

The awl and peg-driver, the peg-cutters, and the peg-feeding rack, with the mechanism for operating them, are all mounted upon a tilting

frame, the line of whose journal-centres lies parallel with the length of the shoe-carriage, and passes through the points of the awl and peg-driver. The inclination of this tilting-frame determines the angle at which the peg is driven, and is governed by a lever extending from it, and resting upon a waved surface that travels with the shoe-carriage.

The claims are to the automatic combination constituting the same, and composed of the following elements or their mechanical equivalents:

1st. A frame or boot-holder, B.

2d. Machinery for moving the boot-holder B, horizontally in directions both towards and away from the awls or hole-making contrivances, or in accordance with the horizontal or peripheral curvature of the sole, such mechanism being the guide I, and bearing-point or tracer H, and return spring M.

3d. Machinery for raising and depressing such boot-holder in accordance with the vertical curvature of the sole, such mechanism being the guide or cam E, and the second frame C, with its tracer F.

4th. Mechanism to give the boot its movement from heel to toe, or *vice versa*, under the awl or pricking machinery; such mechanism being the screw K, cogged-wheel c^1, pawl a^1, or e^1, lever g^1, connecting rod i^1, and crank pin k^1, on shaft K.

5th. Machinery for holding the strip or strips of wood from which the pegs are to be cut, and regularly advancing such strip or strips in the manner required towards the cutters, the same consisting of the troughs *g h*, and slide or carriage i^1, arranged and operating as described.

6th. A series of cutters or cutter-knives *z z z*, so made to operate as to cut from the peg-strips pegs as explained, and hold or retain the same by friction between them, and move such pegs forward to and directly over the holes in the sole previously made by the awls or pricking machinery.

7th. Machinery for pricking the holes in the sole for the reception of the pegs.

8th. Machinery for pressing or forcing such pegs into these holes, such being accomplished by the plate *b*, carried and forced down by the punch *c*.

9th. A rocker-frame or swinging lathe P, made to support and carry the mechanism above denoted, or the fifth, sixth, seventh, and eighth elements of combination.

10th. Machinery for giving or imparting to such rocker-frame its proper movement to insure the correct direction of the awls in punctuating any holes in any part of the sole, such machinery being the movable guide S and the tracer R, the latter being attached to the rocker-frame.

And as auxiliary to the above, or as an improvement, is claimed the reversible plate or awl-holder *b*, made capable of being turned around, substantially in manner and for the purpose as herein before stated.

Also the improvement of so arranging (as described) the awls, and the machinery that cuts the pegs from strips of wood and brings them forward and forces them into the holes, that there shall always be one

or more holes made in the sole, between the pegs that are being driven and the holes that are being simultaneously driven or made in the sole.

No. 10,408.—JAMES J. JOHNSTON.—*Improvement in Heaters for Smoothing-Irons.*—Patented January 10, 1854.

The heater is in the form of ring G, made to fit around the solid core F, cast upon the bottom of the hollow flat-iron.

The patentee represents, that the surface-heater becomes too much chilled for use before the heat of its interior has travelled outward and become available; and that the ring form, by increasing the surface and the mass of the centre part of the box part of the iron, enables it to be longer used without reheating.

The claim is to the raised body, F, as described and represented, and for the purpose described, in its combinations with the heater, with the large central opening to fit the raised body; the outer shell of the box-iron and the heater being adapted, in shape and depth, the one to the other, for the purposes described.

No. 10,409.—JOHN JOHNSTON.—*Improvement in Self-Heating Smoothing Irons.*—Patented January 10, 1854.

This is an improvement in that class of box-irons which are heated by coals burned within the box. It consists of a flue running around the sides of the bottom of the box, and distributing the draught to the coals at every point; the centre of the bottom being made thick, so as to rise in a convexity that causes the ashes to settle into the flue.

Claim.—The inventor does not claim the chimney, wooden handle, fastening for the top, &c.; neither does he claim, in general, the use of a distributing-flue over the bottom of the iron, as that device has been used before in the self-heating flat-iron of Taliaferro & Cummings, patented March 30, 1852. But he claims the flues around the edge of the bottom, as herein described, in connexion with the convexity of the upper part of the bottom of the iron, for the purpose herein mentioned.

No. 10,410.—EBENEZER A. LESTER.—*Toggle-joint Squeezer, for Squeezing Metallic and other Substances.*—Patented January 10, 1854.

This invention consists in giving to the hammer or compresser a positive reciprocating motion, by means of a toggle-joint having a movable fulcrum to let the hammer down as the substance acted upon is reduced; this combined with the bed composed of rollers, or the equivalent thereof, to hold and turn the ball or body of metal for the repeated action of the hammer.

No. 10,411.—HARRY H. MATTESON.—*Improvement in Flexible Cordage.*—Patented January 10, 1854.

This cordage is made of strips of whalebone, or like material, covered with oil-silk, India rubber, or any other water-proof substance,

and then cotton, flax, or silk thread, plaited over or around it, after the manner of covering whip-stocks.

The claim is to the method of making flexible cordage impervious to moisture, and that will not shrink or stretch by use or exposure; forming the body or core shreds of whalebone, bamboo, or rattan, covered with a water-proof coating; and the whole completely covered with plaited thread.

No. 10,412.—Wm. G. Merrell.—*Machine for Cutting Ellipses.*—Patented January 10, 1854.

This improvement on the trammel plate in ordinary use, is to secure greater steadiness in the cutter-bar in quick movement of the machine, which is accomplished by resting the cutter-stock E on the trammel plate B, as described in the claim, as follows: "The manner in which the driving-pulley G, and cutter-stock E, is made to rotate firmly in the trammel plate B, viz: having the ways C C on the upper surface of the trammel plate B, and a circular ledge or projection D on the under surface, and causing the pulley G and cutter-stock to press firmly against the ways and ledge or projection, by means of the screws *b b*^{1}, and nuts *c c*, &c.

No. 10,413.—H. E. Pierce.—*Machine for Matting the Ends of Match-Blocks.*—Patented January 10, 1854.

This machine is to obviate the necessity of using glutinous substances upon the ends of match-blocks (before submitting them to splitting-knives.) Figure 1 is a perspective view of the complete machine. A series of rollers, G, are turned by crank V, and the block is thus drawn between those rollers and corresponding rollers, B, C, E, above. The filleted roller B, by pressure, indents the end of the block; and the similar roller C likewise indents at right angles to the former lines. The surface of the block is thus covered with small projections, or teeth; and, as it passes beneath a smooth roller E, these are crushed, and the fibres closely intertangled, or "matted" together. The block is afterwards split into matches.

The inventor does not confine himself to the precise arrangements of the devices, but claims any equivalent means capable of producing the desired end.

No. 10,414.—David Pierce.—*Gold-Separating Cylinder.*—Patented January 10, 1854.

This invention consists in having the interior of the cylinder of an inclined-stepped surface with a valve, and opening at the bottom, through which, when in solution, the earth, &c., passes in over the steps, and by gravity is deposited upon the different steps, or washed out as may be, and thus the metal is separated from other matter or materials.

No. 10,415.—J. P. SPOFFORD.—*Saw-Gummer.*—Patented January 10, 1854.

This invention is upon the combination of the cutter *i* and collar *r*, with the recesses *b* and *k*, so as to change the cutter, when the teeth become dull from use on one part, to the other, where they are sharp; and thus make it perform double service.

No. 10,416.—CALEB C. WALWORTH.—*Apparatus for Discharging Condensed Water from Steam-Pipes or Vessels.*—Patented January 10th, 1854.

This invention is designed for the purpose of removing from long lines of steam pipes the water produced by the condensation of steam, and consists of a close vessel having an inlet and outlet pipe. The former, for the passage of steam and condensed water into the vessel, connects with the steam exhaust-pipe from which the water of condensation is to be abstracted. Within the vessel is a float open at top. Attached to the bottom of the float, and extending above it, is a valve connected with another similar valve, by crossed plates, the width of which are equal to the diameters of the valves. The first valve works through an aperture made through the bottom of a small outlet chamber connected with the outlet pipe. There is an inlet chamber, directly over the second valve, connected with the outlet chamber.

The claim to the combination with the float D, the outlet tube C, the valve *a*, and opening *e*, (or the mechanical equivalents of said valve *a* and opening *e*,) the second valve *b* and opening *f*, (or the mechanical equivalents for said valve *b* and opening *f*,) so arranged and applied to the tube C and the vessel or float D, as to operate to counteract the pressure on the other valve *a*, under circumstances and for the purpose substantially as hereinbefore specified.

No. 10,417.—STEPHEN D. WILSON.—*Improvement in Steam-Ports, in Valve-Seats, and Slide-Valves for Steam-Engines.*—Patented January 10th, 1854.

This invention consists in the enlargement and peculiar construction of the steam-ports in the valve-seats B, E, and F, figs. 2 and 3, and in adapting the valve A, fig. 1, to these parts, so as to exhaust the steam from one end of the cylinder with greater rapidity than it is admitted at the other.

No. 10,418.—JOHN H. BARTH.—*Improvement in Bedsteads.*—Patented January 10th, 1854.

A is one of the main or outer posts, which support the curtains; B the post of the bedstead proper; *a* is a support attached to the outer post E; *b* is a holder attached to the bottom of the post B, and provided with cheeks, *r r*, which embrace the shank on the bearer. This

shank has catches *i*, to fit into recesses in the cheeks *r r*, and a shoulder, *e*, to fit a face *f*, on the holder. The bearer can be disconnected from the holder, so as to take down the posts A at pleasure, by turning the tops of the latter outward, when the catches *i* can be unlocked from the recess in the cheeks *r r*. In putting up they can be replaced in the same manner, and are held in bearing by the weight of the bedstead tending to throw the tops of the posts A inward.

The claim is to the notched ckeeks *r r*, in combination with the shank *a* and catch *i*, as described for fastening the post A to the inner frame, by inserting the shank between the cheeks in the manner set forth, and giving the post a vertical position; and also, causing the speedy disconnection of the same by the inward inclination of the foot of the post, substantially as specified.

No. 10,419.—HARVEY BREWER.—*Torch Lamps.*—Patented January 10, 1854.

This invention is designed to enable one to employ camphene, or other inflammable fluids, for the purpose of lighting street lamps; and consists of a reservoir for the fluid, formed by two concentric tubes united at top by a plate. The interior tube is open at both ends, and extends about half way to the bottom of the reservoir, all entrance to which is closed, except that through the interior tube; the object of the arrangement being to prevent the spilling of the fluid in case of accident from falling.

The claim is to the peculiar construction of the reservoir for containing the camphene—that is to say, the combination of the exterior tube E with the interior tube *d*, for the purpose of preventing the liquid from being spilled should the lamp be overturned, while the reservoir is at all times open for the reception of the torch.

No. 10,420.—JOHN KEDZIE.—*Improvement in Filters.*—Patented January 10, 1854.

The claim is to constructing a filter, with an inverted jar B, having a detachable perforated base *c*, of a concave form, with a flange or rimmed edge, &c., to receive and retain in place the reservoir B.

The water, after properly packing around the reservoir, filters through and enters it below. The pipe *e* is to allow ventilation, and also the escape of confined air. The concave bottom prevents it from moving about easily.

No. 10,421.—J. W. MCGAFFEY.—*Improved Mortising Chisel.*—Patented January 10, 1854.

This instrument is designed chiefly for mortising window-blind stuff. The improvement consists in adapting two pivoted lips, B B, to an ordinary mortising mandrel, so that these descend, cut the mortise, and retain the chip on ascending until partly drawn out; the chip is then

caused to drop from the lips by the tongue D, which is checked by means of its internal shaft or handle *k* coming in contact with a dog or stop.

Claim.—The construction of the chisel substantially in the manner herein described, viz: having two cutting lips B B inserted in a slot or recess *a*, in the lower end of a stock A, said lips working upon pin C C, which pass through the stock. The inner surface of the lips being constructed as shown, and having tongue D working between them, which tongue, when the chisel is raised, forces apart the cutting edges of the lips, and throws out the chip from between said lips. The cross-bar of the tongue, when the chisel descends, throwing apart the upper portion of the lips, and closing the lower and cutting ends, the tongue being raised between the lips by means of the spring, or its equivalent.

No. 10,422.—H. B. SMITH.—*Device for reversing a Mortising Chisel* Patented January 10, 1854.

This machine reverses the chisel, when it has cut to the end of the mortise by friction upon a band or pulley Q Q. The treadle C is suffered to drop when the chisel has cut to one end of the mortise, and the lever E disengages a catch from one of two pins, opposite to each other, on the circumference of a pulley F on the mandrel. The band passing over the two pulleys O L is thus allowed, by friction on the pulley *r*, to turn *half round* the mandrel. The foot again brings the piece in contact with the chisel, &c.

Claim.—Reversing a chisel by friction, operating the mandrel substantially as described.

No. 10,423.—JAMES SWAIM.—*Magnetic Toy, called the Magnetic Cupid.*—Patented January 10, 1854.

This is an apparatus for the amusement and instruction of children. Upon the top or cover of the box containing the mechanism is balanced, so as to turn freely upon a pivot, a magnet, carrying upon its upper side a figure of a cupid, (this figure, as well as the cover on the box, are left out in the drawing,) by which it is also concealed from view. With the mechanism in the box is connected another magnet turning on a centre directly under that of the cupid. A series of question-blocks is provided, and when one of these is introduced into the box, through an opening at the side, it acts upon the mechanism, and partially rotates the interior magnet, which, attracting the magnet above, directs the finger of the cupid to an answer on the box cover appropriate to the question on the question-block; *m*, in the engraving, is the interior magnet, made to revolve by a pinion T, and a rack *h*, attached to the sliding-block A. From this block A projects a long pin Z, that enters into a hole in the question-block as the latter is introduced through the opening C. The bottom of this hole strikes the end of the pin Z, and then begins to act on the sliding-block A; and thus, by making the hole of a different depth in each block, which must be pushed in its whole length by closing the door D upon it, the magnet

m will be made to take a determinate direction for each. The block A is drawn back by a spiral spring H.

Claim.—The combination of the question-blocks with adjustable holes, the sliding-piece A, the toothed wheel T, the rotating-bar magnet, and the exterior cupid, in the manner and for the purpose substantially as hereinbefore described.

No. 10,424.—THOMAS L. JONES.—*Paddle Wheel.*—Patented January 10, 1854.

The claim is to the combination, with the mode of maintaining the paddles *e* in parallel planes by means of the suspension ring *b*, making the wheel and paddles in two parts, with a space between for the reception of the suspension ring.

No. 10,425.—PERRY C. BATES.—*Improved Method of Constructing Hinges.*—Patented January 17, 1854.

The arrangement of this application is a cast-hinge, the union between the two parts being one made up of a coiled or helical thread-joint, which joint is produced, and the two parts of the hinge united by the casting of the hinge. The claim is to the spiral or worm-joint hinge constructed as described.

No. 10,426.—T. DAVIDSON.—*Saliva Pump.*—Patented January 17, 1854.

Consisting of a curved metallic U formed vessel A, B, the legs of which are received along side of the teeth, or one inside and the other outside of the teeth, and the cavity of these legs communicating with that of the tube D, and the usual valve *d*, and pump G, F. By the working of the pump piston the saliva is drawn from the mouth and discharged into the reservoir. The *claim* is to drawing the saliva from the mouth, and keeping it dry during the operation of filling teeth, by means of an instrument constructed with a hollow mouth-piece, which connects with a tube and suction and force-pump, as described.

No. 10,427.—J. J. GREENOUGH.—*Improvement in Machines for Pegging Boots and Shoes.*—Patented January 17, 1854.—Reissued July 4, 1854.

Fig. 1 is a perspective view of the machine fitted to drive pegs of metallic wire; fig. 2, a cross vertical section on a smaller scale. The peg driver is a reciprocating slide *d*, operated by an excentric *g*, on the shaft *h*. The wire for forming the pegs is first passed down through a hole in the slide, as shown in the figures, and just previous to the descent of the slide is caught between two cutters, one of which is fixed to the lower end of the slide, as seen in figure 4, and the other, *x*, to

the lower end of a lever y, screwed to the slide, and operated by a face cam k, on g, fig. 1. The slight cut made in the wire at the commencement of the downward stroke thus serves as a hold by which to force it into the leather; and at the end of the downward stroke a further movement of the lever y cuts it entirely off, and leaves the remaining portion of wire sharp enough to pierce the leather at the next stroke without the use of an awl.

Fig. 3 shows an apparatus substituted for that above described, in driving wooden pegs. The driving slide or stock d carries an awl v, and a peg driver u, which pass through fixed grooves o^2, o^1, in the plate o, and are separated by an interval equal to the space between the pegs to be driven. The groove o^1 receives the end of the peg blank fed into it from a trough screwed to the front side of o; and a sliding cutter p, being forced downward by a pin on the side of the excentric g, is driven against the side of the blank by the action of the inclined plane o^3, so as to cut off a peg by a draw cut. The knife, also, by being thus driven latterly over the groove o^1 forms with it a tube, in which the peg is confined till forced into the leather by the driver u.

The shoe last L is fixed upon a carriage a^3, so mounted that it can turn and move freely in every direction, and, by means of self-acting mechanism, is made to travel round in such manner as to keep the line of the pegs always coincident with that of the awl and peg driver. The universal movement of a^3 is provided for by means of two slides at right angles mounted upon a table that is free to rotate upon an axis in the same vertical line with the awl and peg driver, the axis at the same time having a vertical play, and being supported by a weighted lever b^1 pressing the shoe permanently up against a fixed stop-plate. The motion of a^3 is governed by a groove on its under side forming a pattern of the line of pegs to be driven, into which groove projects the upper end of a spindle c^1, which spindle carries a small pinion that gears into a toothed rack just within the pattern groove, and by its rotation causes the groove to traverse over the end of the spindle. The spindle and pinion receive their motion from a lever c^2, acting by a ratchet wheel and click, and connected with the driving shaft h, above.

The coincidence of the direction of the groove with that of the awl and peg driver, is preserved by means of a fixed stud or guide, projecting upward into it at a short distance to one side of the axis c^1. The support of this fixed stud is a collar e^1 fastened to a hollow fixed shaft c, rising from the lever b^1.

The claims are to the automatic combination constituting the improved pegging machine, and composed of the following elements, or their mechanical equivalents, enumerated in the succeeding claims, and comprising the peg-cutter, peg-driver, centre-guide, shoe movement, &c.

1st. The cutting of the peg from the peg blank by a lateral motion of the cutter against the side of the blank, the cutter assisting to hold the blank in position while it is driven substantially as herein described.

2d. The combination of parts composing the "universal movement carriage," consisting of a disc supported upon the arm of a horizontal lever, so that it can be raised or lowered, surmounted by the device for holding the work, having a free motion in all directions, substantially in the manner and for the purpose described.

3d. The centre guide for directing the movement of the shoe or other article in the course indicated by the pattern of the sole, for the purpose of keeping the line of the pattern as herein specified, so as to keep th line of the pattern coincident with that of the awl and peg driver.

4th. So constructing, arranging, and operating the shoe carriage, that each point of the sole which is to receive a peg shall be brought successively to the same point under the stationary pegging standard, so that the pegging shall be effected, without interruption, entirely around the shoe or other article, substantially as herein described.

5th. In combination with the moveable carriage, the stationary pegging standard made adjustable, or the equivalent of that adjustment, so that the pegs can be driven at any distance from the edge of the sole or centre of motion of the carriage holding the material to be pegged as above set forth, so that a new pattern will not be required to drive a second row of pegs within the first row.

6th. Driving the pegs by a tool having a positive motion, as described, in both directions.

No. 10,428.—D. T. HITCHCOCK.—*Diaphragm Pump.*—Patented January 17, 1854.

This invention alludes solely to the *shape* of the two surfaces comprising the periphery of the elastic diaphragm. The two disks F and G (constituting the piston) clasp between them at *i i* the annular elastic diaphragm D D. These peculiarly-curved clasping surfaces gradually compress the diaphragm, prevent its elasticity, and prevent its rapidily moving. The claim covers nothing more.

No. 10,429.—ELIAS C. HYATT and CHRISTOPHER MEYER.—*Improvement in the Manufacture of Boot and Shoe-Soles of Gutta Percha or India Rubber.*—Patented January 17, 1854.

The material, in its plastic state, is passed between two rollers, marked 1 and 2 in the engraving, so as to form a continuous sheet of various thicknesses in its different parts, suitable for the heel, the shank, and the toe. The external surface of the sole is formed by No. 2—*a* being a corrugated surface for the toe parts, *c* for the heel part, and *b* a smooth surface for the shank part. After the continuous sheet has been formed between the rollers, it is cut up into pieces of suitable width for soles.

The inventors say: "We are aware that India rubber has long since been reduced to sheets by rolling, and that the rollers used for this purpose have sometimes been engraved to produce a figured surface, analogous to that often connected to the heels and fore parts of shoes; but these sheets have been substantially of uniform thickness, varying only in the slight indentations, &c., required to produce an ornamental or figured surface. This we do not claim. But we are not aware that India rubber has ever been rolled into sheets having a substantial variety of thickness in its different parts. Nor are we aware that shoe-soles, having the proper variety of thickness, have ever been

rolled out, or made in one solid piece, before our invention; nor was it known that such forms could be produced, as we have produced them, in India rubber, until our experiments practically illustrated the fact.

What we claim, therefore, as our invention, and desire to secure by letters patent, is—

1st. Producing a shoe-sole, or other analogous manufacture, in India rubber or gutta percha, in one piece, having a variety of thicknesses in its different parts, by the use of rollers whose surfaces present the reverse of the forms to be produced, at a single operation, substantially as herein described.

2d. Forming soling of India rubber or gutta percha, with shanks, fore-parts, and heels of appropriated differences of thickness in one solid piece, at one operation, as described—thus producing a useful, economical, and novel manufacture.

3d. Also, forming such solings, or analogous manufacture, in continuous sheets, at one operation, by rolling, as described.

No. 10,430.—ABRAHAM MCINTURFF.—*Improvement in Machines for Mincing Meat.*—Patented January 17, 1854.

The machine consists of a vertical cylinder *a*, armed with cutters *d*, *f*, and *e*, revolving in a hollow cylinder, armed with other cutters and with what are called stops *m*. The cutters *e* are fixed vertically upon the longitudinal cutters *f*, and the stops *m* are shaped so as to pass between the horizontal and between the vertical cutters.

Claim.—The employment of the compound cutters *e f*, as herein described, in combination with the holders *m*, operating substantially as and for the purposes fully set forth.

No. 10,431.—LORISTON G. MERRILL.—*Pill Machine.*—Patented January 17, 1854.

A rectangular machine, having in its upper parts a nearly horizontal endless apron H stretched from rollers G G, on which the pill mass is carried forward and rolled into a sheet between rollers E E, cut into square wire by knife K moved by the machinery, then rolled down the slotted inclined plane M against fingers N, whence it is taken by the sectional roller piece ZB, and carried down the curved concave A, by which movement the pill mass is converted into rounded pills. Fig. 2 is a perspective view of the concave A and the roller ZB in its lowest position.

Claim—The revolving segment with the knife in the manner described; also, the peculiar operation of the fingers which support the pill-worm until the proper time for dropping it between the segment and concave, with the coating-box attached, and moved as aforesaid, or any other arrangement of machinery substantially the same, and which will produce the intended effect.

No. 10,432.—THOMAS J. SLOAN.—*Apparatus for Supplying Water to Steam Boilers.*—Patented January 17, 1854.

Claim.—"Combining with the motor which operates the cock or valves, and with the supply-pump, or with either, a mechanism which, when the said motor and pump, or either, fail to operate, shall operate the valve of the whistle or other alarm, to give warning that the apparatus needs personal attention, with the view to perfect safety."

The mechanism referred to in the claim, as shown by the drawing, is lettered d^1, e^1, f^1, g^1, and the alarm is lettered h^1.

No. 10,433.—C. W. STIMPSON.—*Improved Photographic Plate-Vise.*—Patented January 17, 1854.

The invention consists in so constructing the vise for holding the metallic plate, that all the surface of the plate is exposed to the action of the buffer, or polishing-wheel, without having any part of the vise projecting above the surface of the plate. It may be used in the hand upon a polishing-wheel, or may be fixed on a stationary bench.

The plate to be polished is laid on a carriage-bed C, and sustained by tips E and F, and firmly clamped there by the action of the lever arm G^1 and cam G.

Claims.—The plate *a*, with the ways BB, in combination with the carriage-plate C, with its projection and T head, and lip E, operating in conjunction with the lip F upon the main frame *a*. Also the manner of securing the carriage-plate C to the ways BB by means of the slot and T head, and moving the same backward and forward upon the ways BB by means of the eccentric or cam lever, in the manner specified.

Also the arrangement by which the carriage-plate can be changed from one side to another, simply by bringing the lever arm back to its farthest point to the left, or in the direction opposite to the course indicated by the arrow.

The inventor disclaims the lips E and F, and the cam-lever, separately considered; but he claims the several parts in combination, as herein set forth.

No. 10,434.—IRA WARREN.—*Tonsil Instrument, to remove elongated Tonsils.*—Patented January 17, 1854.

The invention consists of curved scissors h h^1, working in the groove space of loop O, by means of handles k k; the extra handles s s being designed to enable the operator to seize the part cut by the scissor-blades.

The *claim* is to an instrument for the excision of the tonsils, and other analogous operations, the crescent-shaped blades constructed and operating substantially as described.

No. 10,435.—GEORGE W. GRISWOLD.—*Amputating Apparatus.*—Patented January 17, 1854.

Consisting of an upper and under vertical thin plate, A and B, which meet together to clamp the bone of the limb after the soft parts have been severed by the knife. Plate A is hinged so as to guide it in its movements. The saw is worked in the groove of D, as in the kerf mitre-box. Piece B may be elevated or depressed, as required, by means of dog G.

Claim, to the combination of the adjustable rest B, movable disk A, and guide or standard D, for holding the bone, retracting the flesh, and guiding the saw in amputating limbs; the whole being made and operating substantially as described.

No. 10,436.—DAVID C. MOREHEAD, Assignee of CHARLES T. P. WARE.—*Improvement in Clasps.*—Patented January 17, 1854.

There are two novel features in this clasp; the one shown in figure 1 is used when there is no backing, the projections *a b* holding the clasp tight.

Claim.—The spring clasp-lock, so constructed and arranged that the lips L shall when closing depress the wide end C of the tongue T, and allow it at last to spring outward into the enlarged space S, between and above the lips, where it is held firmly by the turned-over end of the tongue, or by the thickness of the metal itself, whether used in the projections *a b*, or without them.

No. 10,437.—LEWIS B. WHITE.—*A Truss.*—Patented January 17, 1854.

The invention in this case is confined to the arrangement of the stirrup joint *e, d, j*, and the spring *f*, controlling the action of the parts *a a*.

The *claim* is to the knuckle K, the stirrup *e*, and the spring *f*, the offset of the bow as shown at *d*.

No. 10,438.—CALVIN ADAMS.—*Improved Copying Press.*—Patented January 24, 1854.

This press is intended for copying letters; and the nature of the improvement consists in connecting the platen to the lower plate or bed by a hinge, either attached immediately to the platen, or to a lever bar which carries it; so that the platen may be raised or opened like a book, to receive the copying-book. Also, in the mode of giving the requisite pressure by the use of a cam working on the extremity of a lever, in combination with a screw to adjust the press to any required thickness of book to be used, or degree of pressure to be employed.

No. 10,439.—R. ANDREWS.—*Improved Saw.*—Patented January 24, 1854.

This improvement aims at sawing and planing at the same time. About three sawing-teeth, grouped, are followed by one or two planing-teeth, A A, and the peculiar set of these constitute the invention. From the plate these planing-teeth curve quite abruptly outwards, and near their extremities again curve inwards, so as to bring the cutting edges nearly or quite parallel to the surface of the plank.

This peculiar form of teeth constitutes the claim.

No. 10,440.—L. B. BATCHELLER.—*Improvements in Railroad Car Brakes.*—Patented January 24, 1854.

A brake operated either by the bumper or windlass. The windlass is placed upon a sliding-bar C, which by means of levers is connected with another fixed windlass U, so that the slack may be taken up and the action of the brake regulated.

Claim.—Operating the levers I I, which are attached by the rods J and K to the cross-bars L M, by means of vibrating bars *c c*, said bars *c c* being moved or operated either by turning the standards E E, or by the action of the buffer-rods upon the levers R S, both devices being attached to the trucks, &c.

No. 10,441.—CHARLES P. BAILEY.—*Improvement in Dumping-Cars.*—Patented January 24, 1854.

The figure explains the mode of hanging the body of the cars C C, the dotted lines showing the position when tilted.

Claim.—Hanging or connecting the bodies of dumping cars or wagons to the trucks, axles, or bolsters which usually support the bodies of similar carriages by means of hinged cross-braces or arms, which pass transversely from end to end, or crosswise of the body, as the case may be, one end of each of said arms or braces being hinged to the body, and the other ends to the bearings or support beneath them, for the purpose of allowing said bodies to swing or dump either way.

No. 10,442.—ENOCH BURT.—*Improvement in Fancy-Check Looms.*—Patented January 24, 1854.

This invention consists in the position of the levers *a a*, which operate the jacks to spring the web, and the position of their fulcrums, whereby even sheds are effected both at top and bottom—all the threads of the warp being sprung at the same angle, regardless of the number of jacks used, or the number of leaves of harness used.

Claim.—Hanging the levers or jack-lifters *a a* below the web, and on a shaft parallel with, and at or about a vertical plane with the "fell" or cloth-making line, so as to produce an even shed both at the top and bottom, and render the shifting of the jacks from the said levers sure,

avoiding the jar of the machinery, and obviating the liability of the jacks to hang on the flanges of the levers.

No. 10,443.—SILAS CONSTANT.—*Improvement in Rosin-Oil Lamps.*—Patented January 24, 1854.

To render rosin oil efficient as a material to furnish a cheap light, the improvement in this patent consists in several devices to augment the amount of oxygen in contact with the top of the wick and the flame.

Claim.—1st. Enclosing the portion of the wick which rises above its guide within a perforated conical tube, for the purpose of causing a portion of the air that enters the chamber between G and H to be brought in contact with the wick which is there in an uncompressed state, and to rise in and about the same to the flame.

2d. The draught tube C placed within the burner, and having button *b* and the perforated and deflecting head *a* combined therewith.

3d. The lip *k* projecting downwards from the under side of the cap H, within the series of air holes in the same, for the purpose of preventing gusts of air from producing puffs of smoke up the chimney.

No. 10,444.—WILLIAM CUNNINGHAM.—*Improvement in Washing Machines.*—Patented January 24, 1854.

B B are rollers in swing frames C C, hung upon pivots in the adjustable slide pieces D D. The lower ends of these swing frames are thrown towards each other by a weight F, acting on toggles E E, the whole system admitting, at the same time, of a free motion from side to side. Between the swing frames works a rubber operated by a weighted lever, K.

Claim.—The roller frames hung in adjustable boxes, and connected by weighted arms.

No. 10,445.—JOHN H. DENNIS.—*Bee-Hive.*—Patented January 24, 1854.

The invention consists in the construction of a moth-trap S, which represents a section of the hive; *r* and *q* show the trumpet-mouthed entrance for the moths, which, having once entered, on attempting to fly out through the same passage, their wings strike the end of the tube and prevent egress. *Claim*, to the moth-trap, consisting of a close chamber, having no communication with the rest of the hive, and in which may be placed a vessel containing some fluid attractive to the bee-moth, in combination with a conical or tapering entrance tube.

No. 10,446.—SPENCER B. DRIGGS.—*Improved Attachment to Piano Fortes.*—Patented January 24, 1854.

This invention is called a "linguine" attachment to piano fortes, and figure 1 is a plan view of the interior of a piano forte with this attachment. Figure 2 is a transverse vertical section of the same.

The nature of the invention consists, in combination with the piano forte, of a series of metallic musical tongues or springs, in such a manner that each key, at the same time that it actuates one of the regular series of hammers, will strike one of the tongues, and thereby produce a combination of two musical sounds. Also, in a certain method of connecting the striking actions of the strings and tongues, whereby both are actuated by the key simultaneously.

Claims.—1st. A combination of springs or tongues, *c c*, with a piano forte, in such a manner that a tongue and string are struck simultaneously by the hammers and a single key.

2d. Actuating the hammer which strikes the tongue by means of a jack, *d*, attached to the damper H of its corresponding string, whereby the said hammer is caused to strike by the raising of the damper, when the piano forte action is brought into play, and thus the tongue and string are struck simultaneously.

No. 10,447.—CHARLES R. HARVEY.—*Improvement in Air-Heating Furnaces.*—Patented January 24, 1854.

This invention consists in constructing the top of the fire-chamber of an air-heating furnace with a depression in the centre, which leaves an open space encircling the outside of the flue. This is to equalize the expansion and contraction of the parts, and causes the gases to reverberate and be consumed; thus obtaining the advantages of a diving flue, avoiding the unequal attraction of the currents of heat, &c., to one side, and the irregular expansion and contraction attendant thereon. (See figure, which is a section of fire-chamber and flue, showing the depressed top or bonnet of the dome.)

Claim.—Constructing the bonnet or top of the fire-chamber with a depression at the centre, into which the smoke or exit pipe enters, so that the heat is equalized all around, and the expansion and contraction is made uniform, as above specified.

No. 10,448.—DENNIS G. LITTLEFIELD.—*Improvement in Stoves.*—Patented January 24, 1854.

This invention consists in the employment of a cylindrical grated fire-pot, surmounted by a reservoir closed at top for the reception of the gases which arise.

The unconsumed gases escape through the cylindrical grate at a point where the solid unconsumed coal is in a state of ignition, and are there burned, and, by the heat thus produced, aid in the combustion of the partially consumed coals.

Claim.—The cylindrical grated fire-pot E, in combination with the gas receptacle F, constructed and operating in the manner substantially described, by which the gaseous and more inflammable elements of the coal burn in immediate contact with its more refractory portions, and thus secure the complete combustion of them both.

No. 10,449.—GEORGE NEILSON.—*Improvement in Ventilating Railroad Cars.*—Patented January 24, 1854.

This invention consists in placing on the top of the car a box or case E, communicating with the interior of the car, and provided with cisterns or reservoirs to contain water, and partitions covered with sponge or other capillary substance. The figure represents a vertical section of the case, and part of the roof of a car, P', and a cross-section of the same. F and G are the cisterns, *d e f* the capillary partition, and B the open mouth or communication with the interior of the car.

Claim.—Two or more ranges of sponges or capillary partitions, as arranged and combined with the cistern of water and open-mouthed case E, made to communicate with the interior of the car and the surrounding atmosphere, and to operate when the car is in motion.

No. 10,450—THOMAS PROSSER.—*Forming Hollow Slabs or Plates.*—Patented January 24, 1854.

The invention consists in forming hollow slabs or plates by welding together the two plain plates with the rim or flange between the two, and at right-angles to them; pins being used to hold the parts together while being welded.

No. 10,451.—HARVEY TRUMBULL.—*Straw Cutter.*—Patented January 24, 1854.

The device claimed is that of arranging nearly horizontal wire fingers over, and resting upon, the lower feed-roller of a straw cutter, as seen in the sectional drawing. These wire fingers prevent the straw from getting and winding around the lower roller.

Claim.—To the device for securing the clear passage of the straw, &c., over the interval between the trough and mouth-piece and the lower roller, consisting of fingers, &c., attached to the trough and passing over the said roller into or upon the mouth-piece, and secured from interference with the passage of the straw, &c., by grooves in the face of the roller in which the fingers lie.

No. 10,452.—PETER, W. S., and J. J. HENCH.—*Improvement in Mills for Grinding Sumac.*—Patented January 24, 1854.

An interior perforated cylinder is used for the first part of the grinding, the fibrous portions being removed by means of teeth on the cylinder and on a roller with heads or flanges to prevent the teeth from being knocked off. The coarsely bruised matter falls into an outer cylinder, and is finely ground by balls.

The use of balls for grinding is not claimed.

Claim.—The employment of a cylinder *e*, having projecting points or teeth on its internal surface, with a roller having heads on its ends, on which it rolls and is kept above said teeth; said roller also having teeth projecting from its surface, which interlock into those first named

on the cylinder, by which the better portions of the sumac are beaten off, and, passing through the apertures in the cylinder, enter another cylinder, where they are ground fine as described.

No. 10,453.—JENNINGS and BRIERLY.—*Improvement in Fulling and Scouring Cloth.*—Patented January 24, 1854.

The invention consists in the short flanged roller in common use, for long, flat-surfaced rollers without flanges, so as to permit the cloth to occupy a large surface upon them, instead of being confined to a narrow surface by the flanges.

Claim.—The application of the flat-surfaced rollers *d d d*, in combination with the gatherer, the horizontal and vertical rollers or fold breakers *i i i i*, and *f f*, and guide *e*.

No. 10,454.—JOSEPH MARKS.—*Balanced Steam Valves.*—Patented January 24, 1854.

The portion of the claims here copied are a sufficient guide to the invention.

Claim—1st. The constructing a steam-chest with continuous circular ports or passages both for the induction and exhaustion of the steam, so as to keep a constant and equal pressure of steam upon both ends and the periphery or outer surface of a cylindrical piston-valve, which travels in the bore of the same, and by which also is secured a large area of port by a very small movement of the valve; and this is claimed whether the said valve be used as a main-valve, cut-off, or throttle valve.

2d. The construction of a piston-valve composed of two heads, which fit closely in the bore of the circular steam-chest, and are united by a cylindrical portion of less diameter than the said heads, with a steam-chest constructed with circular ports or passages, as specified in the foregoing claim, by which a large exhaust space is secured without increasing the size of the said steam-chest, or making it very large, and by which means alone provision is made for the escape of the exhaust steam into the exhaust-chamber.

a, is the steam cylinder; *b*, the piston; *c c*, the steam-chest; and *l*, the circular ports; *o*, cylindrical piston-valve, and *r s*, the piston-valve heads. The figure represents the piston-valve in dotted lines.

No. 10,455.—JAMES ROBINSON.—*Thresher and Cleaner of Grain in the Field.*—Patented January 24, 1854.

The invention consists in the use of tightening pulleys S S, to aid in steering the machine, and also in checking the motion of the threshing cylinder. It also consists in adjusting the feed by curved rods c^1, extending partly around the feed-roller. Also, an adjustable feed-gauge or slide V.

Claim.—1st. To the mode of checking the motion of the carriage when under headway, and steering the same by means of the tightening pulleys combined with the threshing cylinder and a two-wheel cart, with double gearing.

2d. To the employment of the adjusting rods C^1 C^1, in combination with the feed-roller, for the purpose of regulating the amount of material to be taken up by the feed-roller.

3d. To the employment of said adjusting rods in combination with the feed-roller and threshing cylinder, for the purpose of regulating the amount of material to be taken up by the feed-roller, and of keeping up the material to the threshing cylinder.

4th. To the combination of the adjusting rods, feed-roller, and gauge-rods.

5th. To the combination of the gauge-rods with the feed-roller and concave, or mouth of the concave, of the threshing machine.

No. 10,456.—ALEXANDER HALL.—*Improvement in Piano-fortes.*—Patented January 24, 1854.

The improvement consists in so arranging the bridges and dampers, that a person can play in one or more octaves at the same time. In order to obtain the additional octave notes, two or more extra bridges are employed, as represented in the figure at B C, placed on the sounding board in front of the bridge A in common use. These bridges are arranged at suitable distances apart to produce the required tones, and are provided with notches or depressions *a a*, over which the strings of ordinary length pass; the bearings *b b*, on the additional bridges, sustain the additional octave strings. Two or more sets of damper-bars are used, one for each octave. The object of this is, that one or both may be played by one key, through the agency of pedal rods *c c*.

No. 10,457.—DANIEL HAIGHT, jr.—*Improvement in Attaching Shafts to Wagons.*—Patented January 24, 1854.

Claim.—Attaching the shaft or tongue by the lateral insertion of the cylindrical-headed draw-iron A into the circular socket of the jack B, by which to form a safe and readily detachable connexion between the shaft or tongue and axle, without the use of bolt and nut or bar, or any intermediate means.

No. 10,458.—WILLIAM OVEREND.—*Machine for Wetting Paper.*—Patented January 24, 1854.

This machine is intended to give to paper a certain degree of dampness, in order to adapt it to receive the ink when used in printing.

A given quantity of paper is placed on the table *g*, and is fed into the machine by the nippers *n*, when it is carried forward between the wetted blankets *a* a^1, passing between the rollers *b* b^1, and finally deposited on the pile beneath the machine, having received the required amount of moisture in its passage.

Claims.—1st. The yielding gauges *i*.

2d. The combination of endless bands *l*, nippers *n*, roller m^2, rollers *u u*, and their bands *t*; the roller *y*, with its bands *v*, and counterbalance *z*; the carriage *w*, with its vertical arm 2, &c., &c.

3d. The combination of the sliding pieces moving in the vertical grooves 5 with the arms and the rollers 7, for adjusting the depositing apparatus to the height of the pile of paper.

4th. The combination of levers with the roller m^1 and curved groove 13, for the purpose of maintaining a uniform tension of the bands *l* in every position of the depositing apparatus.

Fig. 1 is a longitudinal and vertical section of the machine.

Fig. 2 is a plan of the nippers detached.

Fig. 3, side view of the nippers about to close on the paper.

No. 10,459.—Aaron Palmer and S. G. Williams.—*Grain-harvester.*—Patented January 24, 1854.

The point of the invention consists in the devices for moving the rake R over the platform, consisting of a curved rack (*a*) and pinion (*b*) movement, in which the said pinion moves around the inner face of the flattened ellipsoidal cogged rack, as seen in the figure.

Claims.—1st. To the method of transferring motion to the rake on the platform from the driving-wheel, by means of the double-curved rack and pinion on the axle of the driving-wheel, the iron arm *c*, latch *p*, and spring *m*.

2d. To the method of hanging the reel, so as to dispense with any post or reel-bearer next to the standing grain; thereby preventing the grain from getting caught and held fast between the driver and a reel-supporter.

No. 10,460.—Jacob Reese.—*Rolling Car-axles.*—Patented January 24, 1854.

The invention consists in shaping bars of heated iron into axles and shafts, and with collars and journals, by rolling them on their own axes and under pressure between properly shaped converging surfaces.

No. 10,461.—Charles R. Soule.—*Thresher and Separater of Grain.*—Patented January 24, 1854.

The invention consists of—

1st. A spring-board *d*, just below the feed-mouth, to allow stones, &c., to escape.

2d. The rotary vane straw-carrier, consisting of notched bars *f*, having an endway motion, and the beater *i* combined with the movable conducting board *m*, for discharging the grain; also, the mode of hanging and moving the shoe.

No. 10,462.—Moses C. Stiles and Tristram S. Lewis.—*Improved Machine for Making Window-blinds.*—Patented January 24, 1854.

This improvement consists in so arranging the necessary machinery that, with a cutter of the proper kind and a gouge, the slat may be finished, and the stile mortised, at a single operation by the foot of the operator.

A is the arbor on which the cutter C revolves; L, the treadle or lever by which it is operated; K, the rule by which the length of the mortise is determined; and J, the gouge by which the ends of the slats are rounded to fit exactly the mortises that have been cut. The cutter C and chisel J are worked simultaneously.

No. 10,463.—Carl E. Werner.—*Distilling Apparatus.*—Patented January 24, 1854.

The invention consists in the construction of a column-still in cylindrical sections, with inverted caps and discharging tubes for beer.

The figure shows a sectional view, in which the beer from reservoir *d* descends by tube *f* into the several divisions of the still, till it is finally discharged at S. The steam enters at *q*, and is finally discharged at C, with the spirit.

The claim is:

1st. To the inner rim *h*, rising from the floor of the chamber, and surrounding the discharge opening of conducting pipe *f*, to prevent interference of the steam with the discharging action of said pipe.

2d. Surrounding the entrance of the conducting pipe *f* with an open tubular screen *g*, which rises above the pipe-entrance to a height greater than any possible ebullition of the liquid, and terminates below at such portion of the liquid as it is desired to discharge from.

No. 10,464.—John E. Brown and Stephen S. Bartlett.—*Improved Mortising Machine.*—Patented January 24, 1854.

The principal feature in this machine is the conical cam M, that traverses freely the shaft N, which, in combination with the other mechanism, operates the chisel, and enables the workmen to vary the length of the stroke at pleasure.

Figure 1 is a side view.

Figure 2, horizontal section.

The stuff to be mortised being placed upon the bed D, the machine is put in motion, when the person using it by depressing with his foot the lever *e*, and traversing the cam M under the lever L, moves the chisel E a short distance the first two strokes; but by degrees the cam is slipped further into the wood, until the highest part of the cam is brought under the lever L, when the chisel is operated with a full stroke.

Claim.—Operating the chisel by the graduated conical cam in combination with the mechanism described, or its equivalent, which enables the operator to vary the length of the stroke made by the chisel while it is in operation, or suspend its motion at pleasure, without disconnecting the driving power applied to operate the machine.

No. 10,465.—HENRY T. ANTHONY.—*Improvement in Presses for making Miniature-Cases, &c.*—Patented January 31, 1854.

The improvement consists in constructing the platens D so that they can be lined with India rubber, or other elastic material, in such a manner that the embossed leather used for covering the cases may not be injured during the process of attaching it to the wooden frame of the box.

No. 10,466.—PHILANDER H. BENEDICT.—*Daguerreotype-Plate Holders.*—Patented January 31, 1854.

The nature of the invention consists in a more convenient method than is at present in use for holding daguerreotype plates while they are being polished preparatory to their receiving the impression.

The operation is as follows: Place the block A firmly in a vise; place the bent edge of the plate to be polished between the upper edges of the plates O and D, and close them upon it by the screw F; the under surface of the plate B in contact with the upper surface of the block A.

Claim.—The vise upon the side or edge of blocks used for holding daguerreotype plates while they are being polished or buffed. Also, the vice constructed as set forth, and operating by holding the bent edge of the plate between its jaws, as described.

No. 10,467.—ENOS BOUGHTON.—*Cultivator.*—Patented January 31, 1854.

The figure exhibits a nearly rectangular cutting-blade T C T from the axle of a wheel cultivator, and designed to run under the surface of the ground and cut the roots of thistles and other noxious weeds.

This is a case in which the decision of the office was reversed by one of the circuit judges of the District of Columbia.

No. 10,468.—WILLIAM BOYD.—*Mode of fixing Likenesses in Monuments.*—Patented January 31, 1854.

The *claim* is to combining with a monument or grave-stone a case having a concave mirror set in the back part, and having also within it a miniature or likeness of the deceased, which may be kept secure from the action of the weather, or from liability to receive other injury, said miniature being attached to the cover of the case in such way that by opening the cover the likeness may be viewed by reflection in the mirror.

No. 10,469.—WILLIAM CLEVELAND.—*Improved Fountain Pen.*—Patented January 31, 1854.

A stem, *a*, is attached to a sliding arm, which runs a short distance into the barrel of the pen, and has on its upper end a little pin moving

in a slot. The stem is also provided with a cone, which fits the orifice of the barrel, and serves as a stopper when the pen is not in use.

The *claim* is to the employment of capillary action to supply the ink to the pen when used under an arrangement and combination consisting in the employment of the leading stem so fixed in the delivery aperture, that it shall lead the ink down on one side of the aperture and allow the air to enter the other.

No. 10,470.—WILLIAM O. DAVIS.—*Improvement in Presses for Moulding Glass.*—Patented January 31, 1854.

The mould is placed on a table *a*, and receives its pressure from two central pistons, *e* and *p*, of which the one above the table *p* slides in guides in the gallows frame *c*. The pressure from one piston to the other is transmitted through two yokes, *k* and *m*, and their connecting rods *l l*, by which means the table and frame supporting the guides for the moving piston and followers are relieved from any heavy strain tending to flex them out of shape. The upper yoke *m* is free to swing laterally with the connecting rods *l l*, in order to accommodate the play of the toggle-joint lever *q*, which gives motion to the piston *p*.

Claim.—The combination of the rocking-shaft, connecting rods, swinging beam, and toggle-joint lever, or their mechanical equivalents, as hereinbefore described, for the purpose of procuring a vertical pressure in presses, together with the mode of attaching them so as to relieve the bed-plate and frame-work of the press from any strain.

No. 10,471.—SAMUEL L. DENNEY.—*Improvement in divided Railroad Axles.*—Patented January 31, 1854.

Claim.—The gradual conical enlargement, terminating in the more abrupt curved portion, towards the inner end of one part of the axle, in combination with the alloy surrounding it and the adjustible connecting box.

No. 10,472.—CYRUS J. FAY.—*Improvement in Cotton Presses.*—Patented January 31, 1854.

In this press the follower consists of several separate planks F F, drawn by a cross-beam G, and prevented from coming together at their edges by ribs E fastened to the inner side of the upper half of the box; the spaces thus left serving to rope the bales after compressing them.

Claim.—The use of the slats or guide-strips E, arranged and operating in the manner substantially as set forth.

No. 10,473.—ELEAZER W. JOHNSON.—*Improvement in Saw-mills.*—Patented January 31, 1854.

The peculiar features of this machine consist in the new arrangement of the several parts, and the manner of applying the motive pow-

er, steam. This is done by combining the piston-rod directly with the saw-gate in such a way that single saws, or gangs of saws, may be operated on both sides of the cylinder, which latter is placed directly within the centre of the framing.

Claim.—The arrangement of mechanism for driving two saws or gangs of saws and placing the whole upon one bed-plate, in the manner and for the purpose set forth.

No. 10,474.—HARRY LEACH.—*Propellers.*—Patented January 31, 1854.

This improvement consists in an opening or passage E, between the divided floats C D of a propeller, for the escape of the back-water.

The claim is to the combination with each of the arms B B B of a propeller, of two parts of floats C D (projected in opposite directions,) and an opening or passage E, arranged between them for the escape of back-water.

No. 10,475.—THOMAS LONGKING.—*Apparatus for cleaning and buffing Daguerreotype Plates.*—Patented January 31, 1854.

The nature of the invention consists in a mode of cleaning the plate previous to buffing. To accomplish this object, a rotary cushion is used, over which a cover of Canton flannel or similar substance is placed and secured by a ring; the daguerreotype plate being applied to the rotating cushion while held in a proper plate-holder. A buffing wheel *h* is afterwards used to finish the polish of the plate.

Claim.—1st. The revolving cushion *m*, with the ring *o*, by which the Canton flannel or similar covering is secured to the cushion or removed, and a new cover substituted when required.

2d. The arrangement of the gearing and shafts, by means of which the cleaning cushion is combined with the buffing wheel, substantially as set forth.

No. 10,476.—T. O. CUTTER.—*Improvement in Quartz Crusher.*—Patented January 31, 1854.

Claim.—The employment of balls to act by centrifugal action due to their rotation about a common centre, where the said balls are combined, and act against the inner periphery of a shell or concave, which rotates on a common axis with the balls, and which, by reason of its rotation, distributes and holds the material to be ground, &c., in the concavity of said shell.

No. 10,477.—HARVEY LULL.—*Shutter Hinge.*—Patented January 31, 1854.

The claim is to forming a self-locking hinge, cast in two pieces, so that a shutter hung thereon may swing open and shut on a horizontal plane, and lock when opened to its limit, and so that, also, when locked

open, the strain shall be taken off the spindle and thrown on the cam-arms.

Fig. 1 represents the hinge about to lock when the shutters have almost reached the wall. Fig. 2 represents the hinge locked when the shutters are entirely open.

No. 10,478.—JAMES MCCARTY.—*Improvement in machinery for Scarfing the edges of Skelps for Lap-welded Tubes.*—Patented January 31, 1854.

This improvement consists in a pair of rollers having vertical and horizontal adjustments and bevelled shoulders, so that the skelp plates of different widths may have bevelled edges formed on their opposite sides, in being passed through the rollers.

No. 10,479.—JOHN L. L. MORRIS.—*Improvement in Steam Hammers.*—Patented January 31, 1854.

Claims.—1st. Admitting steam to the cylinder above the piston, and exhausting the steam therefrom through ports *g g* and *j j*, which are opened and closed by an annular valve T, working in the cylinder itself and in the steam-chest S, which is placed above and forms a continuation of the cylinder.

2d. Combination of a bell-crank latch-lever J with a trigger or catch K, of T or other shape, when the fulcrum of said catch-box is attached and stationary in relation to the hammer-block, and one end or arm is attached to the connecting-rod of the hammer-block, and receives the necessary movement to actuate the trigger or catch to set free the valve-rod, by means of a continued descent of the connecting-rod after the hammer is arrested by striking the blow,

The rod I is connected with one end of the walking-beam, and the piston-rod H (by means of a connecting-rod) with the other end of the same. C is the hammer and C^1 the hammer-block. Fig. 1 represents a vertical and longitudinal section through the machine, and figure 2 a vertical cross-section through the steam-chest.

No. 10,480.—CHARLES G. PAGE.—*Improvement in Electro-Magnetic Engines.*—Patented January 31, 1854; in England, May 3, 1851.

A A represent two horse-shoe electro-magnets of soft iron, acted on by two sets of helices B B, and B^1 B^1; one arrangement of the pair of electro-magnets being shown in fig. 1. Motion is communicated to the electro-magnets by the action upon them of the helices alone, which have not only been discovered to be capable of exerting a great force when made on a large scale, but at the same time present the advantage of a long range of action. The motion of the electro-magnets is communicated, through the connecting-rod I, to a crank and fly-wheel. Upon the shaft of the fly-wheel is a cut-off, as it is termed, by which the current of the battery is alternately thrown upon the

coils B B for the stroke in one direction, and upon the coils B^1 B^1 for the return stroke.

G G represents soft-iron armatures, the object of which is, by their reaction upon the magnets at their approach to them, to increase the force near the end of the stroke.

Figure 2 represents a coil of heavy copper wire of a square form in section, the object of the square form being to fill the space occupied by the coil as fully as practicable with conducting material.

Claims.—1st. The employment of the axial action or force of the electro-current as a mechanical agent or motive power, for the various purposes herein named; the power being produced by the combination or united operation of a helix or helices, and axial bar or bars of iron, and a cut-off or its equivalent, for regulating the motion of the axial bar or bars, under a general arrangement in principle substantially as set forth in this specification.

2d. The employment of co-operating electro-magnets or armatures, in combination with axial bars, helices, and cut-off, or its equivalent, substantially as herein set forth.

Lastly. The employment of square wires in the construction of helices for electro-magnetic purposes, substantially as set forth.

No. 10,481.—WILLIAM PALMER.—*Water-Gauge for Steam Boilers.*—Patented January 31, 1854.

The claims are to the use of the double tubular case in combination with the lever, having a float at one end working one of the tubes, and a compensating plate at the other, working in the opposite tube; also, the use of the lever, having a float at one end and a compensating plate at the other, whether working in a double tubular case or otherwise, in combination with an upper and lower rod-valve for operating a bell by means of the steam escaping through these valves, whether using the paddle-wheel or any equivalent device for that purpose, to indicate the minimum or maximum of the water in the boiler.

No. 10,482.—EBENEZER G. POMEROY.—*Improvement in making Sheet-Iron.*—Patented January 31, 1854.

A paint is formed from ground plumbago, pulverized charcoal, and the black soot deposited from burning bituminous coal, along with ivory or bone or lamp black, either with water, weak spirits, or any acetous preparation, until the paint is very fine and fit to be applied. This is applied with a soft brush to the previously cleansed surface of the iron. The iron is then passed between rolls, and thereby the carbonaceous matter in combination with the surface of the iron forms a permanent coating thereon.

The *claim* is to incorporating with the surface of iron solid carbonaceous matter by pressure, so as to protect it from oxidation and beautify it at the same time. No drawing given.

No. 10,483.—Benjamin Underwood.—*Improvement in the construction of Printing-Blocks.*—Patented January 31, 1854.

The nature of the invention consists in the construction of suitable movable types of wood, or other material to answer the same purpose, and so arranging them together that they shall collectively constitute blocks with which ornamental figures and designs may be printed on cloths and other fabrics, in one or more colors.

Fig. 1 is a plan of a case for holding the movable types, the end-piece a^1 being removed. The case *a a a* is represented as being half full of types, composed into one-half of a design. The bottom of this case is grooved, as seen at *g*, which grooves extend across the entire width of the bottom of the case. All the types have angular projections on their lower parts, which fit and slide in these grooves.

Claim.—The above described movable types with angular projections, and blocks with grooves to receive the angular projection of the types.

No. 10,484.—Frederick J. Thring.—*Improvement in Carpet Bags.*—Patented January 31, 1854.

This carpet bag is provided with a metallic frame D, extending all around one side of the bag, and furnished with a hinged part or clasp E, by which nearly the whole of one side of the bag can be thrown open, the clasp being properly secured with lock and key.

Claim.—Constructing the carpet bag with its top B, and bottom C, of equal or nearly equal widths, and arranging round its front a strong metallic frame D; attaching to the front and near the centre of said metallic frame, by hinges or loose joints, a metallic swinging cover E, which extends from the centre to the top of the frame, and has a ledge on its inner face; the said cover serving to close up the mouth of the bag, and, in connexion with the metallic frame D, to keep out all dust and rain.

No. 10,485.—Edward Town.—*Machine for Paging Books.*—Patented January 31, 1854.

The type for printing the numbers are arranged spirally on a cylinder placed under the table, on which the book to be paged is placed, and in which there is an aperture of sufficient size to admit one number at a time, by means of the lever V and arm S. The printing is performed by a pedal, and a ratchet movement at one end of the cylinder rotates the cylinder at each movement sufficiently to present a new number, by means of the screw-shaft C.

Claim.—To the arrangement of type in spiral columns around a cylinder for the purpose of printing successive numbers, the cylinder being moved laterally while it revolves by means of a screw on the end of its shaft, substantially as described.

No. 10,486.—PETER L. WEIMER.—*Steam Hammer.*—Patented January 31, 1854.

The claim is to the arrangement of the toggle W, the catch U, the arm T, the weight I, and the shaft *g*, for the purpose of opening the valve admitting steam into the cylinder, from the concussion or spring of the anvil in its bed, caused by the force of the blow of the hammer.

No. 10,487.—ISAAC L. DICKINSON.—*Improvement in Churns.*—Patented January 31, 1854.

This churn is one of the kind which has a cylindrical tub, with a vertical revolving dasher, the latter being shown in the engraving by *f f*. Outside of the dasher are breakers *g g*, attached to cross-pieces *k*, which are free to slide up and down the dasher-shaft *c*. In churning, these breakers are let down, till pins *l l* enter holes in the bottom of the churn and hold the breakers stationary. In gathering the butter, the breakers are raised till the pins leave the holes in the bottom of the churn, and the dashers *f f* are received into slots *j j* in the lower cross-piece of the breaker frame, and, catching by springs, hold the latter in that position so as to revolve with the dasher.

Claim.—The combination of the movable or rotating dashers *f f* with the breakers *g g*, constructed and operated as above described, so that said breakers may remain stationary while churning, and revolve with the dashers to collect the butter, substantially as herein described.

No. 10,488.—LE ROY S. WHITE.—*Improvement in Furniture Casters.*—Patented January 31, 1854.

In the interior of the socket of the caster is formed a square-shouldered groove F, which receives and confines a spring D in the form of an open ring. The inner circumference of this open ring is smaller than the shank of the caster; and as the latter is forced into its place the ring is slightly distended, until it comes to a groove F in the shank, into which it then springs and holds the shank from falling out. The shoulder of the latter groove is bevelled, so that, although the shank will not drop out in ordinary use, it can be drawn out by the application of force, when desired.

Claim.—The patentee disclaims the invention of making the shank of the caster detachable from its sockets; also the employment of a spring to hold the shank in the socket; also the arrangement of said spring in a groove made in and round the shank, and the making the spring to bear against the internal surface of the socket made without a groove; but,

What is claimed is, the arrangement of the sustaining-groove F, of the spring D in the socket E, instead of the shank *c*, so that, when the shank *c* is being drawn out of the socket, or when it is within or out of the same, the spring will remain in the socket. Also, in combination with the spring and groove made in the socket, to make the groove G of the shank with its upper side flaring, and the upper end of the shank

bevelling, as described or as represented in the drawing, the said flare of the side of the groove and the top rendering the shank capable of being detached from or attached to the socket.

No. 10,489.—EBENEZER BARROWS.—*Rotary Engine.*—Patented February 7, 1854.

The invention, as covered by the claims, is:

1st. The revolving steam-wheel E, having projecting rims or flanges F revolving within the interior of a stationary cylinder A, in which there are two or more fixed abutments or stops N, which fit steam-tight, so as to close and divide the annular space between the cylinder and wheel into two or more steam-chambers; the said wheel having four or more pistons, G, G^1, C, C^1, whose operation is controlled by a stationary curved groove or way H in each cylinder-head D, so as to be alternately acted upon by the steam in the cylinder, and drawn within the wheel so as to pass and clear the abutments or stops N, substantially in the manner herein shown.

2d. The six-way cocks or steam-heads M, having each a steam-passage R leading to its plug-seat; two steam-passages T T leading from the plug-seat to opposite chambers of the cylinder; two exhaust passages U U leading from opposite chambers of the cylinder back to the plug-seat, and one, V, leading from the plug-seat to the exhaust-pipe, their cock-plugs Q being provided with suitable openings and passages to make communication to and from the steam and exhaust-pipes to either division of the cylinder, or to close both.

3d. The mode of uniting the face and side packing-pieces of the pistons and abutments so as to make them steam-tight at their corners, by dove-tailing them, as shown at O P, fig. 3.

4th. Making the steam-cylinder within and a part of the piston-wheel, the stationary rim forming the outer side of said cylinder, so that the three sides of said cylinder shall revolve with the pistons.

One half of fig. 1 represents a section through the tube W, the other half a section through the tube S. Fig. 2 represents an end-view on a smaller scale.

No. 10,490.—A. M. ASAY.—*Dental Chair.*—Patented February 7, 1854.

The invention consists in the arrangement of the crank *r*, screw *e*, and pinions *b*, *b*^{1}, to raise and lower the seat of the chair. See figure.

No. 10,491.—EDWARD BANCROFT and WILLIAM SELLERS.—*Improvement in Turning-Lathes.*—Patented February 7, 1854.

The first part of this improvement consists in the employment of a series of cog-wheels *k*, *l*, *m*, *n*, connected and turning together, and receiving motion from the mandrel *d*, or from any other source, and imparting motion to the screw-shaft *x*; each successive wheel in the

series being of greater diameter than the other, and the number of wheels being equal to the number of changes required to be made. These wheels are combined with another and corresponding series of wheels, *r*, *s*, *t*, *u*, in inverted order, all engaging the wheels of the first series, each wheel of the second series being on a separate hollow arbor, and each wheel so arranged that it may act independently of the others in connexion with the screw-shaft *x*, or leader, to prevent it from being strained out of line. This is done by means of a metal trough b^1, which supports the screw throughout its entire length, while it is permitted to turn freely but accurately therein.

Claim.—The method of varying the motions of the mandrel and screw-shaft, or leader, by means of the two series of wheels, each series consisting of wheels of different diameters, and all the wheels of one series being connected and turning together, and imparting motion to all the wheels of the second series, with different degrees of velocity, substantially as described; when this is combined with the method of locking any one of the wheels of the second series with the shaft of the screw, or leader, by having the wheels on separate sleeve arbors fitted to turn on each other, and adapted to receive a locking pin or bolt *y*, fitted to holes in a plate a^1, fast on the shaft of the screw, or any arrangement effecting the same end by means substantially the same.

Also the manner of supporting or sustaining the screw or leader, by combining therewith a trough, substantially as specified; having the outer end of the said screw, or leader, without a journal.

No. 10,492.—JOHN and WILLIAM MCADAMS.—*Improved Machine for Ruling Paper.*—Patented February 7, 1854.

The principal result secured by this invention is the ruling of both the horizontal and vertical lines on the paper, by passing it once through the machine. This is done by feeding the paper from the platform *c*, till the first set of lines are ruled, and then by a peculiar arrangement of the revolving drums *r r*, and the band *q*, changing the direction in which the paper is moving, so as to take it off at right-angles to its former course, and feed it to another set of pens, *x x*, which rule the cross-lines.

Fig 2, of the drawings, represents a device for lifting the pens from the paper, so as to leave any desired width of heading; this is effected as the paper is fed into the machine, by means of the edge of the paper striking the movable tongue D, which is attached to the inside of the roller 1, on another portion of which is a cam-projection G, by means of which the pens are raised at intervals.

Claims.—1st. A machine for ruling paper, in which both the horizontal and vertical lines of the sheet are ruled in passing once through the machine, by any arrangement of devices which carries the sheet, after one set of lines is ruled, in a direction at right-angles to its first course, to another set of pens, which rule the sheet across the lines first made.

2d. Changing the direction of the movement of the sheet, after passing from the first set of pens, by means of the travelling band *q q* and revolving drums *r*, *r*, *r*.

3d. Lifting the pens so as to leave a heading to the sheet, by means of the roller E, with its movable tongue and cam-projection, acted upon by the edge of the paper and the motion of the feed-roll, so as to lift an adjustable arm connected to the pen-holder.

4th. Forming grooves in the feed-rolls, so that the pens may rest over these grooves and not upon the rolls, between the passage of the different sheets.

5th. Guiding the sheet straight to the second set of pens, after the direction of its movement is changed, by means of the converging bands which carry the edge of the sheet against a proper guide, or against the side frame-work of the machine.

6th. Forming the last roll, which carries the sheet after it is ruled to the receiver, of a polygonal or angular shape, so that its revolution may give a vibratory motion to the sheet.

No. 10,493.—JACOB REESE.—*Machine for Making Nuts*—Patented February 7, 1854.

The claims allowed on this application cover:

1st. The trough of cold water A in combination with the rotating die-box B, for the purpose of cooling each die or mould after it has discharged its nut, and preventing the water from coming in contact with other parts of the machine or with the nuts which are made in it.

2d. The guide-head *g*, in combination with lever *h* and guide *j*, for the purpose of communicating to the rotating mould-box the peculiar motion required, consisting of a succession of sudden yet steady quarter-revolutions, each followed by a pause or rest, during which the mould-box is held firmly in its place.

No. 10,494.—MICHAEL SHIMER.—*Winnower.*—Patented February 7, 1854.

The invention is confined to the construction of a trunk in a winnowing machine, of which A, in the drawing, represents the trunk; P, the hinged board; and *f*, the inclined screen. The *claim* is to the combination of the board and the screen for accomplishing three purposes: 1st, to prevent grain from passing over the edge of the screen till fully exposed to the blast.

2d. Partially cutting off the draught, as the state of the grain may require.

3d. Expanding the draught of the blast as it ascends the trunk, to weaken its force, so that the pure grain will not be carried over into the horizontal part of the trunk. Also the square rubber G, in combination with the circular flange formed on its lower end, for mashing all impurities softer than the wheat, and also for preventing the grain from passing out of the bottom of the hopper before it has been thoroughly pulverized.

No. 10,495.—JOSIAH TURNER and W. C. STUROC.—*Winnower.*—Patented February 7, 1854.

Claim.—The combination of the oscillating cradle H, made of slanting-slat or blind-work, with the two blowers M and Q, and the fender E.

The purpose of this invention is to separate the grain perfectly from the straw and chaff after leaving the thresher.

No. 10,496.—JOHN M. BACHELDER and MOSES G. FARMER.—*Improvement in the mode of making Battery Connexion with an Electro-Magnetic Coil on the Travelling Carriage of a Telegraphic Register.*—Patented February 7, 1854.

The battery wires P^1 N^1 are run along a series of bars, *y y y*, jointed together in the manner of what is called the lazy tongs, one end of the series being jointed at a^2 to the fixed base-board of the whole machine, and the other to the travelling carriage B, a bottom view of which is seen in the engraving, and which is designed to carry the marking apparatus, and cause it to traverse the length of a cylinder wrapped with the paper upon which the message is to be written.

Claim.—The combination of the system of progressive levers with the battery wires, the base-board, and movable platform, so as to operate substantially as specified, and for the purpose set forth.

No. 10,497.—THOMAS BLANCHARD.—*Improved Machine for Polishing Plough-handles and other articles.*—Patented February 7, 1854.

This machine is designed for reducing, smoothing, or polishing plough-handles, or other articles of a similar description, by means of an endless polishing or smoothing belt, and such other devices as are necessary to sustain the article to be operated upon while passing under the said belt. The engravings—fig. 1 being a plan, and fig. 2 a vertical section. H is the plough-handle, or article to be operated upon; A, the endless belt; E, a lever, whose fulcrum is at F, and by which, through power applied to the arm *b* of said lever, the endless belt is pressed against the article to be operated upon to the extent required. Motion is communicated to the machine by means of the driving-shaft T, to which is attached the pulley S, around which and the pulley Q extends an endless belt. An endless belt U, extending around the driving-shaft and a large pulley V, gives motion to the shaft I, and produces such a rotation of the frame G as to cause the smoothing-belt A to revolve in a circle entirely around axis I, and in contact with the article H.

Claim.—The above-described mode of applying and operating said belt with respect to the article to be smoothed or polished, the same consisting in not only making the said belt to traverse or run on sustaining pulleys or their equivalents, but, at the same time, to rotate such belt and sustaining contrivances in such manner around the article to be smoothed or polished, as to cause the belt, while in motion on its

rollers, to run in contact with and around the surface of the article to be reduced, smoothed, or polished.

Also, the combination of the feeding-carriage, its guides, and the guide-rollers, or the mechanical equivalents therefor, with the endless polishing belt, provided with machinery imparting to it its compound motion, or movement in two directions, as specified.

No. 10,498.—GEORGE EDWARD BURT, assignor to GEORGE EDWARD BURT and DAVID C. BUTTERFIELD.—*Improvement in Machines for Cleaning and Assorting Bristles.*—Patented February 7, 1854.

The bristles are laid by hand across a pair of endless bands E and F, with the butt-ends upon E and the small ends upon F, and are carried by them beneath a roller K and an endless band L, passing over the rollers K and I. The bands E and L clasp the butt-ends of the bristles between them, and, as they travel along, pass over a large roller G, by which the small ends of the bristles, being left at liberty, as soon as they pass the roller K, are raised from the band F, and presented to the action of a comb T. This comb, with its staff *g*, sliding freely in a turning collar *h*, is operated by a crank, shown in the drawing, so as to be alternately brought down upon the bristles and carried through them, and raised up and carried back. As the butt-ends of the bristles are on the point of leaving the bands E and L and roller G, the small ends, after passing the comb T, are caught between the band F, and another endless band M passing over the rollers I and N; and these bands F and M are carried with the bristles over a second large roller O, by which the butt-ends of the bristles are in their turn raised up and presented in a free state to the action of a second comb U.

After passing the combing apparatus, the bristles are delivered lying loosely across the band F and a band P, in travelling along which their butt-ends come in contact with the inclined face of another endless band l^1, that receives a rapid succession of smart taps from a light hammer r^1, acting on a long bar p^1, which just touches the band l^1. By this means the butt-ends of the bristles are brought so as to lie evenly in one straight line, and in this state they are taken between two endless brushes *v v*, which carry the bristles along until the small ends of the longest are caught between inclined rollers a^2 and f^2, and endless bands k^2 and q^3, by which they are drawn from between the endless brushes, and from which they are conveyed along k^2 and q^3, and between two other endless bands, of which l^2 is one, till they are delivered by the rollers i^2 and q^2 upon the end of the platform w^2.

The shorter bristles are left between the endless brushes till those of middle length are caught between a second set of rollers b^2 and g^2, and are in like manner drawn from the brushes, and delivered from the rollers i^2 and q^2 upon the middle of the platform w^2. The shortest lengths of all are finally caught between a third set of rollers c^2 h^2, and delivered upon the inner end of w^2.

To prevent the bristles from following the rollers i^2 or q^3 around, so as to interfere with their proper delivery, the rollers are formed with

deep grooves t^2 running around them and receiving the teeth of two combs u^2 and v^2.

Claim.—1st. The combination of machinery for combing or straightening the bristles, and machinery for separating or assorting them, as specified.

2d. The combination of two movable combs or rakes T U, the two lifter-wheels G O, and their carrying endless belts E and L F and M, so arranged as above described; the whole being for the purpose of first holding the mass of the bristles by one part or portion of it, and lifting and combing the remainder of it, and subsequently seizing and lifting it by such combed part or portion, and combing the part previously seized, all as specified.

3d. In combination with the machinery for combing or straightening the bristles, and machinery for assorting or separating them, is claimed the endless guide-belt l^1, the spring-board p^1, and rapping apparatus or hammer r^1, as applied and made to operate, substantially in manner as specified.

The inventor does not claim the combination of an endless platform, a roller, and a series of pressure rollers, as employed in the machine of Lorenzo D. Grosvenor; but what he does claim as of his invention is the combination and arrangement of the two endless brush-belts v v, and two series of draught rollers, and their two sets of endless bands, as made to operate together and assort the bristles, substantially as hereinbefore specified.

4th. He claims the combination of the combs u^2 v^2, and their grooves t^2, &c., with the delivery rollers, so as to operate substantially in manner and for the purpose as specified.

No. 10,499.—DEXTER H. CHAMBERLAIN.—*Bit or Drill Stock.*—Patented February 7, 1854.

The *claim* is to the arrangement of the bell-crank I, separate from and so as to play or rotate within the tool-shaft stock, as exhibited in the drawing; the said bell-crank having a spur-gear to work into a pinion fixed into the end of the tool-shaft, and to impart to said tool-shaft an accelerated motion.

No. 10,500.—DEXTER H. CHAMBERLAIN.—*Awl-Haft or Tool-Holder.*—Patented February 7, 1854.

The *claim* is to arranging and applying together the jaws and confining-screws, the same consisting in making the jaws *a b* separate from the screw-shank *e*, (on which the screw *f* is cut,) and not only providing the screw-nut with a closing concavity or socket *i*, but the screw-shank *e* with a closing socket *g* for the jaws to rest in; the whole being so that when the screw-nut is screwed down upon the jaws, the combined action of the jaws and the screw-nut shall operate to simultaneously close the jaws at their upper and lower ends, as specified.

No. 10,501.—JOHN J. CROOKE.—*Manufacturing Tin Foils or Sheets.*—Patented February 7, 1854.

The *claim* is to making a new article of manufacture—that is, foils or sheets composed of tin and lead, formed in separate strata, but so that the exposed or external surface shall be of pure tin only, the lead being entirely encased within the tin.

No illustration.

No. 10,502.—LEWIS S. DAVIS.—*Improvement in Blocks for Horse Collars.*—Patented February 7, 1854.

The collar block is made in four sections, $e\ e^1$, $f f^1$, hinged together at the extreme ends, and provided at the side joints with sliding spring plates $m\ m^1$. The several sections have pins $k\ k^1$, $l\ l^1$, which enter inclined slots $h\ h^1$, $i\ i^1$, in the base board a, by the action of which pins and slots the sections are made to expand in width simultaneously with their expansion in length, which last is effected by the action of the screw c and nuts $g\ g^1$.

Claim.—The inventor does not claim as novel the construction of a horse collar in expanding sections; but he claims as new, and desires to secure—

The four-parted collar block, of which the front pair of sections are hinged together at the gullet, and the back pair at the neck of the block, as described; the same being combined with a temporary bolt, placed at the intersection of the partings, the said bolt serving to unite the base and cap, and also forming a fixed bearing for the right and left hand screw c, which, in conjunction with the pins on the block, and the diverging grooves in the base and cap, effect the prolongation and proportional lateral expansion of the block, or devices substantially equivalent.

No. 10,503.—F. O. DESCHAMPS.—*Improvement in Omnibus Registers.*—Patented February 7, 1854.

The machine is one of the class long since used or proposed in France as a security against the frauds of omnibus drivers, and in which a bell-pull is combined with an alarm-bell and a registering apparatus, both inaccessible to the driver. On a passenger entering the omnibus it is the driver's duty to register his fare by drawing the bell-pull, and his omission to do so is notified to the passengers by the failure of the bell to give its signal.

Claims.—1st. Attaching the secret slide G to the bolt of a lock H, substantially as described, so that it can only be moved to expose or conceal the numerals on the dials by a key which properly fits the lock.

2d. Combining the secret slide G with a stop-bar J, substantially as described, so that both move together in such a manner that when the apparatus is left free to work by the stop, the numerals on the concealed dials are not exposed, and when the numerals are exposed to view, the apparatus is made inoperative by the stop.

No illustration.

No. 10,504.—ELIAS HALL.—*Tool Holder.*—Patented February 14, 1854.

The claim is to the flat spring-catch C, inserted in the side of the stock or handle, there being an opening *b* through the handle, in a line with the catch of the spring, by which one is enabled to see and mark on the shank of the tool held the point touched by the catch of the spring when the shank is pressed home in the socket, and thus readily mark the recess or notch in the shank.

No. 10,505.—J. S. HALL.—*Plough Point.*—Patented February 7, 1854.

The claim is to the hinges *i*, constructed in such a way that the edge of the front part of the mould-board may lap over the edge of the back part or wing of the mould-board, to prevent clogging.

No. 10,506.—J. B. HAYDON.—*Improvement in Metallic Hubs.*—Patented February 7, 1854.

The addition of a disk D, between flanges B C, having mortises *a b* for the insertion of the spokes, each one of which fits upon and is supported by D. A bolt *c* secures each spoke.

Claim.—The disk D, in combination with the recesses or "saw-cuts" formed in the end of the spoke, into which said disk is fitted, and acts to secure said spokes in a permanent position, and effectually prevents them from working in the hub.

No. 10,507.—ANSEL MERRELL, assignor to JOHN M. IRVINE and A. MERRELL.—*Improved Machine for Dressing Spokes.*—Patented February 7, 1854.

The design of this machine is to dress in a complete manner a spoke of any desired dimensions and of any taper. This is done by the peculiar arrangement of its parts, as shown in the engraving, which presents a longitudinal section of the machine: *a a* are cam-props, on which either end of the piece of wood is to be seated, and which are connected with a sliding-carriage A. B is a rotary cylinder of cutting-knives of suitable shape to form the spoke; *d d* are springs attached to the carriage for the purpose of keeping it steady upon the rails, and also to permit it to rise and fall in order to conform to the curvatures of the rails *b* and *c*, and give the proper taper to the spoke. By means of the clawed sliding-dog *i*, and the screw-threaded cam-lever *k*, together with the gripe-lever *m*, a spoke of any size may be kept firmly in its place.

Claim.—The combination of the cam lever, having a screw-thread thereon, with the adjustable dog and supports, as herein set forth; whereby the rough stick or block may be held firmly at any required angle to the carriage, and at a variable distance below the knives, in order that it may dress spokes of variable taper, and of different lengths and thicknesses.

No. 10,508.—Reuben Knecht.—*Improved Daguerreotype-plate holders.* Patented February 7, 1854.

The claim is for the application of the screw tire wheel J to the projecting arms H H or D D, which is effected by turning the swivel A, which is firmly attached to the wheel aforesaid, in the direction of the arrow; and the application of the oblong aperture B to the projection of either arm D D, according as one or the other arm requires a further projection. The corners of the plate to be polished are turned down, so that when placed on the block, the extending arms H H, acted upon by the wheel G, press against the turned down corners, and securely hold it in place.

No. 10,509.—Julius E. Merriman.—*Improvement in Sewing-birds.*—Patented February 7, 1854.

Claim.—Employing in connexion with a sewing-bird a spring tape-measure, arranged in a case placed directly under the belly of the bird, the said case being so situated that it may have, if desired, a handsome pin or needle cushion placed on its top.

This arrangement renders the sewing-bird capable of measuring as well as holding the cloth, while the sewing or measuring operations are performed, and also makes it more convenient for use, and ornamental in design.

No. 10,510.—Clark D. Page.—*Improvement in Lime-Kilns.*—Patented February 7, 1854.

In the drawings, *c c* are the main fire-places, and *j j* the principal passages from them to the column of limestone. There are also two small auxiliary fire-places *o o*, in which are burned the waste fuel from *c c*, and from which the products of combustion pass to the kiln at *p p*. The interior is of the same general form as usual in kilns of this class, except that the diameters of the point where the flues *j j* enter, is some six inches greater than at a point *d*, several feet above. This is for the purpose of preventing the descending column from clogging under the action of the high heat when it meets the flues.

At the bottom of the kiln a metallic shoe or arch *q*, having a cold-air flue *s* beneath it, divides the descending column and cools the limestone preparatory to its being drawn out.

Claims.—What the inventor claims is the form, substantially as described, of the stack or cupola, in combination with the arrangement of flues from the fire-chambers for the introduction of the products of combustion at the lower end, substantially as specified, to insure the burning of the central part of the charge as specified.

He also claims cooling the calcined lime preparatory to drawing it out and exposing it to the atmosphere, by causing a current of cold air to pass through the saddle, or its equivalent, placed at the bottom of the stack, and on to which the calcined lime descends.

No. 10,511.—JOSEPH W. WEBB.—*Portable Door-Lock.*—Patented February 7, 1854.

The claim is, to the claws *b*, in combination with the bar A and thumb-piece B. The bar A is placed with the claws against the edge or post of the door, and by closing the door the claws are forced into the post, the bar A projecting inside; then the thumb-piece is slid over the bar, and, by falling into the notches in the bar, fastens the door on the inside.

No. 10,512.—J. A. WOODBURY.—*Improvement in Planing Machines.*—Patented February 7, 1854.

This improvement consists in combining a rotating disk-cutter with the bed upon which the board to be cut rests, and other devices by which the board is held down upon the bed; these devices serve also as a mouth-piece to hold the fibres of the wood from under the operation of the disk-cutter; and also in the combination of the "Bramah" wheel with the rotating disk-cutter, in order to remove the rough or surplus material before the action of the disk-cutter.

The claims are: 1st. To the combination of the rotary disk-cutter with the pressers and bed. 2d. To the combination of the "Bramah" wheel, so called, with the rotating disk-cutter and its accessories.

No illustration

No. 10,513.—A. H. CARYL.—*Improvement in Picking and Cleaning Flax.*—Patented February 14, 1854.

This invention consists in hooking or bending the teeth of the picker-shaft in the direction of its motion, and arranging them on separate bars, so connected with the shaft that open spaces will be formed through which currents of air operate upon the fibres of the flax during the operation.

The drawing shows a section of the machine with the hooked teeth and the open spaces.

Claim.—The employment of a picker having the teeth hooked in the direction of the rotation, and arranged on separate bars so connected with the shaft as to leave open spaces for the free passage of foreign substances, substantially as specified; when this is combined with hooked teeth in a series of bars above, with open spaces between, substantially as specified, with a current or currents of air, substantially as specified, to act on the fibres during the operation of combing, and with the rotating-brush acting on the picker-teeth, substantially as specified.

No. 10,514.—BALDWIN & CLARK.—*Heating Feed water for Steam-boilers by the waste-heat of the exhaust-steam.*—Patented February 14, 1854.

The principle of this invention is the employment of the expansive capacity of the steam from the jet, by adapting thereto the height and

relative section of the central tubular space, and the rendering of the auxiliary draught thus obtained operative through the medium of a series of surrounding tubular passages opening directly from the smoke-box into the lower part of the main smoke-pipe.

The claim is, to the arrangement of the exhaust-pipes *n n* with a vertical central passage *b* of large section and surrounding passages *c c* of smaller section, the central pipe and smaller passages being open above and below.

No. 10,515.—Lewis S. Chichester.—*Improvement in Machine for Cleaning Wool.*—Patented February 14, 1854.

This invention consists in a peculiar construction of the ribs *b*, viz: with lateral and inclined slots *h*, terminating in an enlargement or hole *i*, which is placed on the rib at or near that portion of the length of the rib where the fibres begin to be drawn through. It consists, also, in providing the picker-shaft with cards in addition to the picker-teeth arranged between the same. (See figure 4, which is a longitudinal vertical section.)

Figure 1, vertical section; figure 2, top view of ribs; figure 3, cross-section of ribs.

Claims.—Making the edges of the ribs, when combined with the picker-teeth for catching and drawing the fibres through, substantially as specified, with lateral, inclined, or curved slots, terminating in an enlargement or hole, to receive the fibres and guide them away laterally from the picker-teeth to prevent them from being chafed or cut between the teeth and ribs, substantially as specified.

Also, making the lateral slots in the edges of the ribs, substantially as specified, and in combination with the picker-teeth at or near that portion of the length of the ribs where the fibres begin to be drawn through, substantially as specified, whereby the cutting of the fibres is effectually avoided.

Also, uniting the contiguous barbs of any two ribs and extending them down below the points of the picker-teeth, substantially as specified, to prevent fibres from passing without being picked or drawn through, as specified.

Finally, in combination with the ribs having lateral slots, substantially as specified, the employment of card-teeth interposed between the picker-teeth, substantially as, and for the purposes, specified.

No. 10,516.—J. Griffiths.—*Improved Valve-Cock.*—Patented February 14, 1854.

The object of this invention is to obviate irregular wearing of the valve D, and is accomplished by fixing it rigidly to its stem *d*, which moves centrally and truly to and from its seat B, thus causing regular wearing, and consequently is self-fitting. It is raised and lowered by turning the yoke *g*.

Claim.—The combination of the hollow fixed stem C, the solid stem *d*, and the yoked nut E, in the manner and for the purposes described.

No. 10,517.—F. C. GOFFIN.—*Fire-proof Safes.*—Patented February 14, 1854.

This invention consists in filling the space between the casings of a safe or vault-door with glass or slag.

In the drawing, A represents the external, and B the internal casing of the safe; C the glass.

Claim.—The use of glass or slag in a vitrified state for filling the space between the two casings of a safe or vault-door; the glass or vitrified slag being poured moulten into the space, or inserted in plates, which may be secured to the outer casing in any proper manner, and an air-space left around the inner casing, as herein set forth.

No. 10,518.—JONATHAN KNOWLES.—*Treating Vegetable Fibre for Spinning, &c.*—Patented February 14, 1854.

The invention consists in cutting flax, rotted or not, into proper lengths for staple, and boiling it with a weak alkaline solution of soda or potash until the shives separate on rubbing. It is then bleached by any bleaching chlorine compound, adding, at the same time, borax, salt, saltpetre, Glauber salts, Epsom salts, sal ammoniac, or any other similar salt.

The applicant alleges that these salts do effective service in subdividing the fibres, and softening the same. No illustration.

Claim.—To the method of preparing vegetable fibre for picking, carding, spinning, and manufacturing into fabrics, by such machinery as is usually employed for performing the corresponding operations on ordinary cotton and wool, by first steeping or boiling it in a solution of alkali; second, washing it with water; third, steeping it in a solution of chlorine bleaching compounds, mixed with a solution of splitting-salts, to bleach and split it simultaneously; and lastly, washing it with water, and then drying it, as herein set forth; whereby the reduction of the fibre to its elementary filaments is expedited, and the expense thereof lessened by dispensing with much of the tedious manipulation and treatment heretofore practised, while at the same time the quality of the product is improved.

No. 10,519.—SAMUEL G. LEVIS.—*Improvement in making Thick Paper.* Patented February 14, 1854.

The nature of this invention consists in an arrangement and combination of mechanism for simultaneously forming two distinct fabrics of paper, and uniting them into one compound sheet, by a continuous operation, and so that these component fabrics shall be inseparably united, while the thickness of the paper may be increased, and the strength and uniformity of the sheet preserved. Two separate pulp-vats, A and B, are employed, each having a forming cylinder of wire-cloth, C, D, which are furnished with separate and distinct endless felts or blankets. The cylinder C forms its pulp or paper on the felt E. The other cylinder, D, rotates in the opposite direction to C, and

forms its pulp or paper on the felt H. The two endless felts, with their respective sheets of pulp or paper, pass together between the guide-rollers K and K^1, and then between the squeezing-rollers F F^1; the two sheets of paper, being in contact while the felt passes between the squeeze-rollers, are effectually united together, and a portion of the water is squeezed out. The compound sheet thus formed passes down along with the felt H, and through the squeeze-roller L L^1, which performs to it the same functions as the first pair of squeeze-rollers in ordinary paper-machines. The paper then passes between another pair of squeeze-rollers, and on to the heated cylinder, in the same manner as in ordinary machines. It will be seen that use is made of a second forming cylinder, a second endless felt, and an additional pair of squeeze-rollers, to effect the purposes desired, viz: of making paper of any desired thickness, and of proportionably increased strength. Two layers may be formed at one operation.

The inventor does not desire to claim generally the employment of two forming cylinders, for the purpose of making paper of increased thickness, as cylinders have been thus used before; but what is claimed as new in the invention, is the combination of the two forming cylinders, C and D, the two endless felts, E and H, and the two squeeze-rollers, F F^1, arranged and operating in the manner and for the purpose substantially as hereinbefore described.

No. 10,520.—Thomas Cook, assignor to Starkie Livesey.—*Improvement in Fire-arms.*—Patented February 14, 1854.

The invention consists in the arrangement of springs in the slotted tubes of the magazine, so connected with a ring moving on the outside of the magazine, that they are pushed forward from the rear, and maintained in their original compressed condition during the successive discharges, whereby the ammunition is pressed forward into the conveyor with the same force as when the tubes were first charged. And this is claimed, whether the effect is produced by the exact means described, or by any analogous contrivance.

Also, the combination of the tube-magazine with the conveyor, so as to be revolved in such manner as to bring each tube of the series, successively, opposite to the hole through which the charge is fed to the conveyor, as often as a charge has been transferred to the barrel, as described.

Also, the combination of the follower *i*^{1} with the cavity of the conveyor and the lever, for injecting the charge into the barrel, as described.

No. 10,521.—John Standish, assignor to John Standish and Horace A. Miller.—*Improvement in Machines for Pegging Boots and Shoes.* Patented February 14, 1854.

In this machine the shoe is fixed upon a carriage mounted in a peculiar manner, so as to feed the shoe along a line drawn over the middle of the sole, from toe to heel; while above, on either side of the sole,

work an awl and peg-driver, in a stock into which the peg-blanks are fed. The awls and peg-drivers on both sides of the sole receive their motion from one end of the lever-beam above, the other end of which is worked by a crank and connecting-rod. The feed motion of the shoe-carriage is produced by a toothed rack and pinion, driven by a weight and pulley, the motion of which is arrested by a pair of pawls that take into a ratchet-wheel, and are raised and lowered alternately, so as to let half a tooth of the ratchet-wheel escape at a time.

Claims.—1st. The vibrating guides, in combination with the peg-feeding rack, awl, and driver.

2d. The arrangement for feeding up the boot or shoe to be pegged; that is to say, the combination of the boot or shoe, held in a proper clamp, with the traversing frames, and with the irregularly curved rails or guides, as described.

3d. The method of regulating the feed by the rack-pawls and weight or spring, as described; the whole being constructed and operating substantially in the manner herein set forth.

No. 10,522.—Robert Preston.—*Improvement in Dyeing Cloth.*—Patented February 14, 1854.

The invention consists in the introduction of adjustable rollers F, near the bottom of the dyeing chamber A, over which the cloth passes, and by which it is elevated or depressed, to keep it a proper distance from the hottest part of the chamber, or so far above the hot plate at all times as to prevent its being injured by the heat.

Claim.—The arrangement for bringing the bottom layer of the cloth within the dyeing chamber to a suitable distance from the bottom of the chamber, so that it may be exposed to a proper and not too intense heat, consisting of the rollers F, which are adjustable by racks and pinions, or their mechanical equivalents, substantially as herein described.

No. 10,523.—Warren Robinson.—*Ship Ventilators.*—Patented February 14, 1854.

This invention consists in so constructing the ventilator, that the movable part B may be raised up to ventilate the ship, by turning the top part or cap B from right to left, and raising it vertically, and again turning it from left to right, when it will be firmly secured in that position by means of inclined planes *e*, *e*, slots *d*, and pins *f*. By reversing the movement the ventilator may be closed securely.

Claim.—The combination of the movable part B, with the two inclined planes *e*, *e*, when the whole is constructed, arranged, and combined, substantially as described. Figure 2, top view; and figure 3, detached perspective view.

No. 10,524.—JACOB REESE.—*Machinery for Rolling Iron.*—Patented February 14, 1854.

The invention, as stated in the claim, is the hanging the fore plate *q* of a rolling-mill on centres placed either above or below the level of the rolls, by adding arms *s s* to the fore plate, working on a bar *t*, or on pivots, for the purpose of removing the fore plate out of the way when the rolls are to be scoured, without detaching it from the frame of the mill.

No. 10,525.—W. G. STERLING.—*Improvement in Planting-Hoes.*—Patented February 14, 1854.

The improvement consists in attaching to the top of the shoe a cylinder C, to be filled with corn through the tubular handle B, and after the ground has been worked with the hoe, to press the seed through the slide H, by simply turning the hoe and striking against the ground lever E, connected with said slide.

Claim.—The connection of the cylinder C with tubular handle B, lever E, and slide H, in the manner described, or any equivalent thereto.

No. 10,526.—HENRY S. WILLIAMS.—*Preventing Explosions in Steam Boilers.*—Patented February 14, 1854.

Claim.—1st. Opening the water-cock D of the steam-boilers A, for the purpose of letting on water for reducing the temperature and pressure of the steam, and thereby preventing explosions, by means of a plunger L and slotted arm N, operated, when the supply should be let on, by the pressure of the escape-steam of the safety-valve, and by means of a spring M, attached to the boiler and slotted arm, when the supply is being cut off.

2d. Starting the steam-pump or "doctor" running, in case it should not be in operation when the pressure of steam in the boiler rises above the given point, by means of the escape-steam from the safety-valve, when admitted to the steam-chest of the pump through a branch pipe K of that carrying the plunger L, said branch pipe being provided with a valve *a*, which prevents the steam from the "doctor" passing into the boiler when the pump is running, but allows of the steam being admitted to the steam-chest when the pump is not running.

No. 10,527.—WOODRUFF and BUTTERWORTH.—*Improvement in Drop Bridges.*—Patented February 14, 1854.

The dotted lines show the position of parts when the bridge is down. The supports C C fold over, and the floor F sinks, to allow the vessel to pass over.

Claim.—The construction of a bridge or draw which may be dropped below the surface of the water, so as to admit the passage of vessels over the same, substantially as above described.

No. 10,528.—Arcalous Wyckoff.—*Machine for making Links for Chains.*—Patented February 14, 1854.

Claim.—The fixed stud-pin *b* and stud-pin *c*, placed at right-angles to each other, in combination with the wiper and cutter *f* and cutter 7, for the purpose of bending the two eyes of the link of the jack-chains simultaneously.

No. 10,529.—John Webster and Orson Spencer.—*Gas-burner.*—Patented February 14, 1854.

The nature of this invention consists in the construction of a gas-burner so formed, that on each side of it is an air-chamber at right-angles to the slit in the nipple, through which passes the gas from the burner; and on the upper interior edge of the sides of the chambers is a flange, and below it a groove, by means of which the atmospheric air is brought in direct contact with the gas.

The drawing is a perspective view of the burner with the improvement attached: A is the burner; B, the outside surface of the air-chambers; C C, the brackets which support the air-chambers; D, the collar to which the bottom of the brackets is secured; E, the nipple, in which is seen the slit for the escape of gas.

Claim.—Affixing or applying to a gas-burner an oblong or elliptical-shaped tube, so constructed and arranged as to deflect a portion of the gas escaping from the burner into the draught of air, which passes on between the burner and the tube, so as to produce a more brilliant flame and more light from a given quantity of gas.

No. 10,530.—George B. Ambler.—*Improvement in Saddle-trees.*—Patented February 14, 1854.

Claim.—The combination of the crooper-loop in one piece with the water-hook, for the purpose of securing either in their respective positions without the aid of screws or other appendages.

No. 10,531.—F. H. Bartholomew.—*Improvement in Water-closets.*—Patented February 14, 1854.

The general operation of this water-closet is like that of several others that have been described. L is a pipe leading from the hydraulic main. On the person taking his seat, his weight acts on the rod *d*, and depresses the stem E of the double-valve F G, closing G, and opening F. The water from the main rushes through L and M, into an air-vessel *g*, condensing the air before it. On the person rising, the reaction of the spring H opens G, and closes F; and the water in G, under the action of the condensed air, is expelled through the pipes M and N, into the basin *a* of the water-closet.

Claims.—I do not claim the use of the chamber *g*, when combined with the supply-pipe, or hydraulic main, and the basin, by means of the common three-way plug turning-cock, operated by the seat, as such

combination has been before used in the water-closet of Jordan. Nor do I claim the puppet-valve cock, with two valves and three ways, as new in itself; but,

1st. I claim a three-way cock, with parts constructed and combined in the following manner, viz: having one principal chamber through which the water always passes, whether being received or discharged; two openings into which chamber being governed by two valves operated by one stem, so that when one is opened the other is closed by the same action of the stem, the third way being without a valve; when these are combined with a second chamber, for the accommodation of a short continuation of the valve-stem, through which the cock is operated, and one of the ways is placed between the principal chamber and the stem-chamber, as described.

2d. Placing such a cock as described above under the seat, or where it may be out of the way, and may be operated by a single rod, when said cock is connected by a tube with a chamber *g*, for the reception and discharge of water under pressure.

3d. In combination with the double-valve, an eduction way, employable for the double purpose of wasting out the water remaining in the pipes above the cock when not in actual use, and through means of which, or whereby, a communication is provided with chamber *g*, for the purpose of keeping it charged with air by means of a valve, or otherwise, at the same time that the said way is closed by valve G, against the escape of water from the chamber *g*, while the seat is depressed.

No. 10,532.—Jason Barton.—*Improvement in Horse-bells.*—Patented February 24, 1854.

The inventor does not claim the employment or use of two clappers, or balls, in each bell, for they have been previously used; but claims as new—

The hanging or suspending the tongues C within the bell, viz: having the tongues placed over curved holders *a*, which are attached to the pad A; said holders being within the bells, and so arranged that the tongues may be placed over them at different points, and thereby be suspended in the centres of the bells, irrespective of the positions which the pad and bells may have when attached to the body of the animal.

No. 10,533.—J. L. Burdick.—*Improvement in Machinery for Paging Blank Books.*—Patented February 14, 1854.

The invention consists in the arrangement of a vertical cylinder, so as to be adjustable by means of a screw on the periphery of the cylinder; the types, having long shanks, are arranged in rows, so as to admit of their being drawn out by the paging apparatus for the purpose of taking an impression, and then returned to give room for the succeeding type.

The paging apparatus is operated by a treadle, and a rack to operate the inking rollers, and two cranks for operating the hammers to

; impressions of the types; attached to the rack is a cam to operate lever for drawing the types from the cylinder to give the impression,

The claims cover the general arrangement of the apparatus, with me of the specific devices.

No. 10,534.—JOHN W. HOWELL.—*Improvement in Machines for Stuffing Horse-collars.*—Patented February 14, 1854.

The material for stuffing is placed in a hopper E; one or more piston-rods R, slightly forked at the end, and worked by a crank and connecting-rod, force the material from the hopper through a grating F and a cone O, into the collar M, which is properly clamped to the outer surface of the cone. As the filling proceeds, the carriage upon which the hopper and cone and their fixtures are mounted yields to the pressure of the piston R, carrying with it the weight N, and being prevented from returning by a pawl *h* and ratchet *i*.

Claim.—The construction of the hopper E, with an adjustable grate or crib-bottom F, in combination with the piston R, funnel O, clamps *e* and *d*, and lever *a*, acting thereon.

No. 10,535.—HORACE SMITH and DANIEL B. WESSON.—*Improvement in Fire-arms.*—Patented February 14, 1854.

Claim.—To the arrangement of the percussion hammer, breech-slide H, and trigger-guard lever; so that the hammer may be set to full cock by the pressure of the back action of the slide H, induced by the action of the trigger-guard lever.

Also, to the arrangement of the dove-tailed recess in the front end of the piston-slide a^1, which enables the slide to seize the metal of the cartridge, and to withdraw the refuse metal or cartridge from the barrel by the piston-slide, when next retracted and discharged by the upward movement of the carrier.

No. 10,536.—ALLEN GOODMAN and LYMAN WHEELER.—*Improved Machine for Scraping and Toothing Veneer.*—Patented February 14, 1854.

The principal features of this machine are, a revolving cylinder *f*, which is fitted to receive the toothing as well as the smoothing-knives, as seen at *s*, and the large revolving bed *i*. Around and upon the bed-roll *i* the veneer is bent, and receives the action of the toothing and smoothing-knives successively, and is kept upon it by the spring-plate *t*, while receiving the action of one set of knives; after receiving which, it is fed along by the notched roll *v* to receive the action of the other set, being now held by another spring-plate *u*.

Claim.—A machine for scraping and toothing veneer, which has a large feeding bed-roll, around a portion of which the veneer is bent [illegible] and a revolving cylinder, with scraping or toothing tools or [illegible] from the axis of the said cylinder, so as to have a

scraping, instead of a cutting, position, substantially as hereinabove described.

No. 10,537.—J. R. Bassett.—*Pump Valves.*—Patented February 14, 1854.

The invention consists in connecting two discharge openings with each other by a circular guide-duct, so that when the valve is driven by the discharge stream from one seat it is compelled to fall upon the other. The claim is to the method of aiding and insuring the operation of the ball-valve F by means of an intervening or dividing ridge, placed between the openings $f f^1$, and forming part of the semi-annular chamber *g*, by which the valve is made to seek and occupy its appropriate seat when acted on by the discharge water in one or the other direction.

No. 10,538.—F. T. Andrews.—*Improved Saw-mill.*—Patented February 21, 1854.

The rock-shaft F receives motion from the piston-rod through the rod *i*, which connects with the crank I. The invention relates more particularly to the arrangement for causing the saw to advance its cutting distance on the downward stroke, and to recede the same distance on its upward stroke. The saw is connected with the driving-beam F by a rocking link *h*, and is guided in its own plane by convenient devices; the upper end being so hung as to allow the lower end to advance and recede the required distance.

Claim.—The method of communicating the advance and receding motion of the saw, and the method of driving it, by means of the half-beam lever F and rocking link *h* with the saw, when operated by a crank, or its equivalent, and pitman, connected at any point between the fulcrum of said lever and the saw.

No. 10,539.—Jason Barton.—*Improvement in the Mode of Attaching Horse-bells to Straps.*—Patented February 21, 1854.

The inventor claims the attaching of spherical bells C to straps by means of wires or rods B; the bells being attached to the wires or rods, and the wires or rods secured in any proper manner to the other side of the strap.

No. 10,540.—J. W. Bliss.—*Improvement in Window-cord Pulleys.*—Patented February 21, 1854.

A pulley, with its shell and face-part separated and fitted by lugs *b b*, by itself, is disclaimed.

Claim.—The shell and its face-piece in halves, fitting loosely together, when combined in the wedge-formed seat *f* and projecting tooth *s*, so that the pulley may be fitted together and in its place with despatch, and be readily removed and taken apart for the convenience of cleaning, repair, or adjustment of the cord, without detaching the latter; and

whereby the shell, with its pulley, when in their place, cannot be moved outward without raising the sash and its weight; fastening-screws are dispensed with, the chafing avoided, and the entry and removal of the pulley facilitated. Further claim: the combination and arrangement of the back-locking bolt with the wedge-formed seat *f* and projecting tooth *s*.

No. 10,541.—E. G. CONNELLY.—*Window-sash Stopper.*—Patented February 21, 1854.

Claim.—The combination of the gravitating catch or bolt *e* with the metallic case or box, giving said catch *e* the form of an annular segment, or the segment of ninety degrees of a circle, combined with said metallic case of similar form, constructed and applied in such a manner that the expansion of the wood cannot retard or obstruct said catch or bolt *e*, as it inserts itself into the recesses or notches in the frame D.

No. 10,542.—JOHN T. FOSTER.—*Stone-Picking Machine.*—Patented February 21, 1854.

The invention consists in fitting sundry series of rows of teeth F in a cylinder D, secured on the axle of a cart in such a manner as to make them fall back and be concealed in the cylinder, as they successively come in contact with the oblique edge of the discharging-plate J, and to drop out again as they get to the under side of the cylinder, thus securing the deposition of every stone picked up by rake L, in the discharge-plate J, and preventing the wedging or locking of the cylinder by said stones.

Claims.—The use of the cylinder D for picking stone, &c., in combination with series of rows of drop-teeth, and cam and spurs for operating the same; the use of the solid discharging-plate, and its combination with the drop-teeth in a cylinder, and the combination of the drop-teeth with the adjustable rake.

No. 10,543.—WILLIAM PERRY GLADING.—*Oar-Locks.*—Patented February 21, 1854.

The claim is to providing the oar with a cylinder surrounded with a band and bolt forming a row-lock, which prevents the oar from wearing off, and also from slipping out of its place.

No. 10,544.—JOHN B. HOLMES.—*Improvement in Derricks.*—Patented February 21, 1854.

The platform *b*, of the hoisting apparatus, is supported upon a large strong circular collar *e* upon the mast *a*.

The platform is at liberty to turn round freely upon the collar, but is strongly secured or clamped down to it by friction wheels, as upon this chiefly depends the support of the derrick above in a vertical position.

The main mast *a* terminates in a vertical spindle, on which turns freely the mast-head cap *c;* and the latter is connected to the platform by brace or tie-rods *d d*, that support it in its vertical position, and cause it to turn round with the platform. The ropes by which the weight is to be hoisted pass over pulleys on the top of the mast-head cap and over other pulleys at the upper extremity of the derrick-boom *g*. The boom *g* is sustained and governed at the upper end by a rope attached to it and passing over another pulley at the top of the mast-head cap, and thence to a windlass, placed like that of the hoisting ropes upon the platform *b*.

Claims.—1st. The combined arrangement of the collar upon the mast, the revolving platform supported upon it and clamped below it, and the tension-rods from said platform to the revolving mast-head cap, as described, whereby a very light mast is enabled to be used, and guys from the head of the mast to anchors, &c., are dispensed with.

2d. Pivoting the heel of the derrick-boom upon the revolving platform, in the locality substantially such as herein represented and described—that is, upon that portion of the platform which is beyond the centre of the platform, when measuring from the point of suspension of the weight.

No. 10,545.—D. and H. STEARNS.—*Improvement in stretching and drying Cloth.*—Patented February 21, 1854.

This is an improvement on the patent of Erastus B. Bigelow, dated September 5, 1848.

Claim.—The means herein shown for stretching the cloth while wet, and carrying the same parallel while being dried; consisting of the endless belt of tenter-hooks travelling in adjustable ways to accommodate different widths of cloth, which ways are parallel to each other except at the ends, where they converge to allow the cloth to be hooked on, and stretch the same as it is moved forward, as specified. And in combination with the above parts for stretching the cloth, is also claimed converging the ways at the delivery end, to relieve the strain on the cloth and allow the same to pass off the tenter-hooks without tearing, as specified.

Also, the heating-cylinder B, and its adjustable roller *a*, so arranged as to keep the cloth in contact with any desired portion of the cylinder, to heat and partially dry the cloth the amount required before it is stretched on the tenter-hooks.

No. 10,546.—J. M. SCHUYLER and WILLIAM ZERN, assignors to D. L. EASTERLY.—*Improvement in weaving Wire Screens.*—Patented February 21, 1854.

The claim consists in causing the warp and weft wires to bend each other by means of clamps, levellers *d* d^1, or their equivalents, operating upon the warp wires each time the lay beats up the weft. Also, in connecting the lay and clamp movements so that the motion of the lay shall give motion to the clamps.

No. 10,547.—SAMUEL F. HOLBROOK.—*Improvement in Contrivances for protecting passengers in Railroad Cars.*—Patented February 21, 1854.

The cushions F and E, for the back and head, are attached to elastic bands *d*, to break the force of a collision. The slides *e* allow of the straps being inclined in either direction.

The inventor does not claim the inflexible reversing backs, nor pads arranged on straps passing across the cars.

Claim.—The above described improvement for supporting the back and head-rests, or either, viz: by means of strong flexible bands, or their equivalents, extended from or near to the floor, to, or near to, the roof of the car.

And in combination with the flexible bands, the set of slide-rails or equivalents therefor, made to support the bands at one end of each, and to allow of their being moved from their angular inclination from one side of the vertical to a similar angular inclination on the opposite side thereof.

No. 10,548.—A. P. HUGHES.—*Prepared tool for Dovetailing.*—Patented February 21, 1854.

This tool is placed upon the mandrel of any lathe for operation. When the wood is presented, the spiral bit B, the plane bit E, and the saw-teeth D, perform their respective functions simultaneously; the bit cutting grooves (seen at *b*, figure 2,) while the saw-teeth remove the surplus material, and the plane-bit smooths and mitres the piece. Two pieces, A A, figure 2, being thus prepared, receive the key C, and the joint is finished.

Claim.—The combination of the three instruments with an ordinary lathe-chuck.

No. 10,549.—RICHARD MONTGOMERY.—*Improvements in Machinery for making Corrugated Beams of Sheet Metal.*—Patented February 21, 1854.

The claim covers the method of forming corrugated metal beams by passing a plate of metal through a series of grooves *a*, *b*, *c*, *d*, between rollers A B, and through a series of crimping dies; *l*, *m*, *n*, *o*, show the grooves in the dies.

No. 10,550.—Cancelled.

No. 10,551.—MARTIN NEWMAN 2d, N. C. WHITCOMB, and G. C. COLE.—*Improvement in Whiffletree Hooks.*—Patented February 21, 1854.

What is claimed is the construction of a trace-fastener on the ends of a whiffletree, consisting of a swing latch D, turning on a pin G, detents J, and springs F, in combination with a hook B and catch or detent C, thereon operating in the manner and for the purpose of pre-

venting the accidental displacement of the cockeye on the end of the trace.

The claim is not confined to the use of the socket in connexion with the spring-latch arrangement, as the spring-latch and hook may be used either on a socket, plate, or shank, as occasion may require, or in any other manner.

No. 10,552.—E. SAMPSON.—*Improvement in attaching Hubs to Axles.*—Patented February 21, 1854.

Claim.—The united band D and tube F secured to the inner end of the hub, combined with the tube G and the axle by means of the single screw *f*, in such a manner as to securely confine the hub and the axle, and also exclude the dust from and retain the oil within the hub.

No. 10,553.—JOHN B. SMITH.—*Machine for Slitting Clothes-Pins.*—Patented February 21, 1854.

This machine is arranged to slit the pin after it is turned. The pins are placed in an inclined spout B, which directs them one by one into suitable grooves for receiving them upon a revolving drum C. This drum by suitable mechanism is caused to revolve intermittently a required distance, and the saws *a a* (having their planes so inclined as to cut out the wedge from the pin) advance and recede alternately as the pin is brought into position. The pin is held firmly while being cut by spring-treadles L, and released when the saws recede. The pin drops from the drum on the opposite side by its gravity. Band-gearing is used, and the entire machinery is driven from one or two drums.

Claim.—1st. The sliding saw-frame or frames, operated on adjustable ways, in combination with the movable groove-bed.

2d. The grooved or fluted bed, whether said grooves are parallel with the shaft on which said bed is placed or radiate from its centre.

3d. The manner of setting off the groove-bed by means of a ratchet, or its equivalent, a worm-wheel operating on the nubs of the index; these nubs being the same in number as the grooves in the groove-bed.

4th. The lever-paws operated by springs, or their mechanical equivalents, pressure-rolls, to hold the pin while being slitted.

5th. The application of the gauging spring for driving the approaching pin towards the end of the groove into which it has fallen.

6th. The safety slide for the purpose of preventing the wrong passage of the saws; in short, the construction of a self-acting machine for slitting clothes-pins, by means of one or more saws, making one or more kerfs into the same, or separate pins, at one advancement of the saws, having the same appurtenances and operated substantially in the manner herein set forth.

No. 10,554.—JAMES FOSTER, jr., assignor to PLATT EVENS, jr.—*Improvement in Seal Presses.*—Patented February 21, 1854.

The inventor does not claim substituting percussive force for pressure in presses generally, nor even in seal-presses; nor does he claim returning the piston or die of a press with a spring. But he claims as an invention and improvement in seal-presses, the combination of the following elements or their equivalents, to wit: a frame-work to sustain the boxes and guides for the piston, a spring-piston bearing the die and surmounted by a knob, or suitable provision for receiving the blow of the hand, and guided by the groove and guide-pieces, or their equivalents.

No. 10,555.—JOHN GLEDHILL.—*Improvement for treating Hair for Weaving.*—Patented February 21, 1854.

The nature of this invention consists in raising a bulb or knob on either end of the hair, by heat or mechanical agency, for the purpose of preventing the hair slipping from the notched hook, or other device, by which it is wholly or partly drawn out from the bunch and served to the loom, and insuring its being properly caught and held.

Claim.—Preparing hair for being woven into cloth by raising a bulb or knob at either end, substantially as shown and described, whether by the action of heat or by any mechanical agent, whereby the hair is made capable of being readily seized and as readily relinquished, by a device which secures it to the operating parts of the loom.

No. 10,556.—CHARLES F. PACKARD.—*Improved Machine for Cutting Laths.*—Patented February 21, 1854.

This improvement consists in a series of reciprocating horizontal cutters I, figures 2 and 3, and a reciprocating vertical cutter D, figure 1.

Figure 1 is a front elevation; figure 2 is a plan showing the horizontal cutters and omitting other parts of the machine; figure 3 gives a front view of the horizontal knives I.

The inventor disclaims the knife D working vertically, and also the toggle-joint for working the cutters I, both of which he says are well known. But he claims cutting laths from a log or block by means of the knife or cutter D having a vertical reciprocating motion, and the knives or cutters I having a horizontal reciprocating motion; the cutters I and D being arranged and operating substantially as herein shown.

No. 10,557.—SMITH THOMPSON.—*Improvement in Spooling Yarn from the Cop.*—Patented February 21, 1854.

This improvement consists in making the back-guide F movable, and to hang on the yarn and freely rise and fall within a socket *d*, the ordinary weight or pressure of the guide being adjusted to such draught as it will be safe for the yarn to endure without damage or breakage

therefrom. An increase of draught will cause the back guide to be lifted, and thereby diminish the arc of contact of the yarn with the friction beam D. See drawing.

Claim.—The regulator or guide as combined with the friction-beam, and made to hang on the yarn and be capable of being raised by it, substantially in manner and for the purpose as specified.

No. 10,558.—JOHN ZINK.—*Thresher and Separator of Grain.*—Patented February 21, 1854.

The invention is confined to a combination of the several parts composing the machine; that is, the straw-carrier *d d d* and apron *e*, on the same shaking-frame F with screen *f*, so that the same motion which shakes out the grain from the straw, and carries the latter forward and out of the machine, shall also carry forward on said apron the grain to the screens and blast.

No. 10,559.—RUFUS PORTER.—*Improvement in Machinery for Making Cordage.*—Patented February 21, 1854.

In this machine the several threads from each flyer P constitute one strand O of the cordage. Each strand, after being twisted by the flyers from the threads, from the flyers passes over and around roller *f*, back over rollers *g*, and thence to an aperture in the side of a twist-shank K; and the three strands, being united at the centre of the said twist-shank, pass through an orifice in the centre thereof to the periphery of the drum M. The rollers *f g* are made to rotate on their respective axles, by the tension of the cordage and strands.

Claim.—The arrangement substantially as herein described, and the combination of the flyers, rollers, and drum, by which the longitudinal motion of the strands between the flyers and the laying point are equalized; the said rollers being made to rotate on their respective axles, by the tension of the rope and strand.

No. 10,560.—SOLOMON SMITH, assignor to SMITH & SCHOALER.—*Particoloring Machine.*—Patented February 21, 1854.

The invention and claims consist in:

1st. The improvement of dividing each of the horizontal layers of the dyeing press into two sections, *a* and *b*, and carrying the cloth to be dyed from the lower to the upper sides of such sections, between the contiguous inner ends of said sections.

2d. In combination with the said mode of using sections, and carrying the cloth between them, the improvement of making the end of one section lap by that of the other, so that the same contrivances used to compress the several frames together, or down upon one another, may also operate to compress the two sections together as well as the cloth extending between them.

No. 10,561.—HIRAM TUCKER, assignor to H. TUCKER and JOS. STORY.—*Improvement in Applying Colors to Stone.*—Patented February 21, 1854. Patented in England, September 23, 1852.

This improvement consists in combining with the drying-oil used in the baths for marbling stone and other surfaces the gum kauri, or a like substance, in order to impart to the oil-colors the property of not commingling with each other, and to set themselves upon the water-bath, preserving the pattern of the stone to be imitated. No illustration.

No. 10,562.—S. B. BACHELOR.—*Improvement in Scythe-fastenings.*—Patented February 28, 1854.

The invention consists in making a long slot *a* in the spotting of the snath, in which is to rest the hook or claw of the shank with the usual ring and wedge; the design being to make a mode of fastening that could be adapted to any length of shank or any claw made.

The claim is, to the combination of the continuous rectangular-slot with the ring D and screw E.

No. 10,563.—JOHN W. CHITTENDEN and WILLIAM C. MEAD.—*Improved Machine for Splitting Hoops.*—Patented February 28, 1854.

The object of this machine is to split from bolts of wood, of a suitable quality, hoops of uniform thickness to the full extent of the number that may have been checked out upon the end of the bolt. The operation is simple: the bolt *j*, being placed between the feed-rollers *h i*, as seen in the drawing—which is a side elevation of the machine—is carried forward to the vertical griping-rollers *o*; after passing which, and while resting on and passing under the anvil and bending-rollers *t* and *u*, it receives the blows of the trip-hammer *c*, which causes it to separate into as many strips as there are checks upon the end of the bolt.

Claim.—The feed-rollers, the griping-anvil, and bending-rollers, or their equivalents, arranged and constructed substantially as described, in combination with a trip-hammer, as described, for the purpose of racking or splitting apart timber (previously checked) for hoops.

No. 10,564.—JOHN P. CONGER.—*Salt Kiln.*—Patented February 28, 1854.

The invention and claims consist—1st. In such construction of the kiln as to have two small fires at each end thereof, with short arches P over the fire-grates, instead of one great fire at one end.

2d. In leading the waste heat by means of the tubes F through the trough G, to heat the brine previous to its entering the kettles B.

No. 10,565.—Lewis W. Colver.—*Combined Seed-Planter and Cultivator.*—Patented February 28, 1854.

The invention consists in hinging loosely to a common pivot C a row of stocks D, provided with teeth E, and shoes J and K, vibrating each independently from its neighbor, and combining such stocks with a seeding apparatus, for the purpose of mellowing the soil, opening the furrows, and dropping and covering the seed, all at one operation, and notwithstanding the unevenness of the ground, and stones or other impediments in the way of the track.

The claim embraces the combination of the stocks, as described, with a seeding apparatus.

No. 10,566.—Robert W. Davis.—*Improvement in Churns.*—Patented February 28, 1854.

This churn is one of the class which have a tub with a concave bottom, and a dasher revolving on a horizontal axis. The dasher is constructed of a main frame, having diametrical arms B and blades *a*, to which main frame are hung, on excentric pivots *e e*, two secondary frames with blades *b b*, *c c*. When the dasher is turned in the direction indicated by the arrow *i*, in figure 2, in the act of churning, the resistance of the cream throws open the blades into the position shown in figure 2.

In gathering and working the butter the dasher is turned in the opposite direction, and the blades then close together in the form shown in figure 2.

Claim.—The manner herein described of dividing the end-pieces C C, and hanging them excentric to the axis of the dasher, in combination with the arrangement of the blades *a*, *b*, *c*, so that the dasher may be adjusted by the resistance of the cream in revolving through it, so as to present six centripetal cutting or agitating blades to the cream; and then, after the butter is produced, to be adjusted by reversing the motion of the dasher, and through the resistance of the butter, so as to present but two centrifugal gathering-blades for gathering the butter, working it into rolls, and expelling the buttermilk therefrom, substantially as described.

No. 10,567.—A. K. Eaton.—*Improvement in Machines for Pulverizing Ores.*—Patented February 28, 1854.

Claim.—A rotating disk or mortar to hold the ore to be pulverized, and the water, mercury, or other liquids with which it may be advisable to mix the same, in combination with a vibrating rubber, or pestle, which is made to traverse the bottom of the mortar.

No. 10,568.—Abijah Hall and Sylvanus Sturtevant.—*Improvement in Snow-Ploughs for Railroads.* Patented February 28, 1854.

Claim.—So shaping, proportioning, and placing the notched shares *a a* of the snow-ploughs, that they will extend down within the inner

sides of the rails, nearly to the cross-ties, without coming in contact with the chairs; for the purpose of removing snow and ice from the immediate vicinity of the inner sides of the rails, and by means of their mould-boards B B discharging the same at a proper distance outside of the rails.

No. 10,569.—Timothy D. Jackson.—*Improved Die for making Seamless Tubes.*—Patented February 28, 1854.

The invention consists in forming a die for drawing seamless metal tubes, constructed with an eye whose periphery is formed of a series of narrow friction-rolls *c*, which produce a substantially equable extension of every part of the circumference of the tube being drawn.

No. 10,570.—Smith W. Bullock, assignor to Stillman, Allen & Co.—*Improvements in Quartz-Crushers.*—Patented February 28, 1854.

Claim.—The application of gear-wheels solely for the purpose of causing the crushing wheels to turn on their axis faster, or make more revolutions, than they otherwise would in rolling around in the trough, the point of contact or pitch-line of said gear-wheels being on a line drawn from their common centre to a point upon the crushing-wheels within its outer diameter or periphery, thereby giving the periphery a slip or sliding motion upon the quartz.

No. 10,571.—Michael M. Gray.—*Machine for making Railway Chairs.*—Patented February 28, 1854.

The *claim* is to operating the sliding former or mandrel U, upon the base or pedestal N, to keep it firm and cool, and cutting, curling, and swedging the plates of metal to be formed into the chairs while in a stationary position, and at a proper heat on the top of the sliding former, instantly, to produce the chairs uniform in shape, and chiefly of low-priced or red short iron, without fracture.

No. 10,572.—Thomas D. Henson and George Rohr.—*Improvement in Seed-Planters.*—Patented February 28, 1854.

The improvement refers to a stirring apparatus to mix the seeds and plaster, or other pulverulent manures, before they are discharged into drill-tubes, and consists in a revolving shaft extending the whole length of one of the two hoppers, provided with a screw-shaped series of obliquely set beaters *e e e*, and a series of cleaning spikes *f f*, the beaters being designed to feed the compost to the spouts clean and open.

Claim.—The revolving longitudinal shaft, with its beaters and spikes, as described.

No. 10,573.—WILLIAM BURNETT and JOHN ABSTERDAM.—*Fusible Disks for Steam Boilers.*—Patented February 28, 1854.

The *claim* is to placing in a pipe which is connected with a steam-boiler, a fusible plug or disk, said plug or disk L being so far removed from said boiler, but so connected with the water therein, that when the water is sufficiently high, the plug or disk will be in contact or so surrounded with water cooler than that in the boiler, as to prevent the plug from being fused; but when the water in the boiler shall fall below a proper height, the steam will enter and come in contact with said plug, and so surround it as to cause it to melt.

No 10,574.—JAMES RENTON.—*Improvement in Zinc-White Furnaces.*—Patented February 28, 1854.

The improvement and claim consist—

1st. In the combination, with a usual furnace, of any number of ore tubes F F and tubes or spaces M M, placed side by side, and communicating with each other through openings *f f* in their sides; the ore-tubes being exposed to a degree of heat sufficient to evaporate the oxides or other substances contained therein, and make them pass through the openings *f f* into the tubes or spaces M M, these latter being protected from the heat by the ore-tubes, and serving either to collect and condense the oxides or other vapors, or to convey them to any other suitable receptacle.

2d. In the hood or trunk N, furnished with suitable openings *i i i*, and placed above the tubes F and M, substantially as described, for the purpose of receiving, leading off, and cooling the oxides or other vapors escaping from the ores.

No. 10,575.—FRANK G. JOHNSON.—*Table to hold Bank Notes while cut and trimmed, &c.*—Patented February 28, 1854.

The table is constructed with short legs, and a cutting-board B B, through which two thumb-screws C, with points E, by means of which the paper is held, project upwards, and are to hold fifty to one hundred sheets of bank notes. A T-ruler is used, and a sharp knife to cut the edges while the paper is held by a clamp.

Claim.—The combination, with a table, of the movable cutting-board B B, and the depressible needle-screws C C, combined together, in the manner as specified, for the purpose of cutting bank notes.

No. 10,576.—A. S. LYMAN.—*Improvement in Air or Gas Engines.*—Patented February 28, 1854.

A specification in this case would be too lengthy to be given here.

The *claims* are thus:

1st. The mode of preventing the waste of the compressed air, liquid carbonic acid, or other driving power, by interposing between it and

the outer cylinder of the engine a reservoir of water, or other suitable liquid, substantially in the manner described.

2d. The mode of applying the heat to the generating power, through the agency of water or other liquid, in the manner substantially specified, thus avoiding the possibility of burning and scaling the metal, and also greatly increasing the extent of heating surface.

3d. The mode of preventing the loss of power otherwise caused by the expansion of the air, liquid carbonic acid, or other driving power, in passing through the repository and refrigerator, and being cooled and condensed before the working piston J has completed its stroke, in the manner described—that is, by moving the generating plunger E downwards as the working piston recedes from it, thus enlarging the heating chamber as fast as the air or other fluid expands.

4th. The combination of the generating cylinders A with the opposite ends of the working cylinder B, direct, thus dispensing with contracted passages and pipes, causing the piston to move as rapidly as the working fluid moves.

5th. The construction of the heat repositories *a a*, and restorers of small glass tubes or glass rods *c c*, arranged substantially as described, for the purposes specified.

6th. The combination of the heater c^1 c^1, the repository, and the cooler c^2 c^2, substantially as described—the heater being above the repository, and the cooler below it, so that, as the heat rises, it does not tend to destroy the effect of the repository, but rather renders it more perfect.

7th. The partial isolation or separation of the upper part of the outer case, containing the heating liquid, from the lower part, containing the cooling liquid, by the introduction of a bad conducting material between them.

8th. The combination of the external heater with the internal heater c^1 c^1, and the combination of the external refrigerator with the internal refrigerator, substantially as specified, for the purposes set forth.

No. 10,577.—William McBride.—*Improvement in Machines for Making Bed-pins.*—Patented February 28, 1854.

The main points in this invention consist in attaching to a common turning-lathe a cutter-stock or sliding-block D, provided with the peculiar devices mentioned, for making the pin and throwing it out when completed. These are, a barrel E, of a tapering shape, enclosing the inclined cutter F, to form the body of the pin; the V-shaped cutter T, to form the head and cut off that end; and the spring-plug G, which moves freely in the barrel E, graduating the length of the pins, and, by means of the spring H, forcing them out the instant they are completed.

Claims.—Attaching to a common turning-lathe a sliding cutter-stock D, and providing said stock with two peculiarly shaped cutters, one stationary and the other movable; the stationary cutter being of such shape that it forms the tapering part of the pin, while the movable cutter is of a proper shape and construction to form a round head on the

pin, and simultaneously therewith cut off the pin from the block, ready for being discharged, substantially as herein described.

Also, making all the pins of a set of a uniform length, by employing a spring-plug or gauge, in the manner described, and by the same means effecting their discharge after being turned, headed, and cut off, as herein described.

No. 10,578.—JAMES PITTS.—*Improvement in Cotton-picking Cylinders.*—Patented February 28, 1854.

The invention consists in constructing the cylinder for cotton-gins of hollow, perforated metal, as thick as the fibre of the cotton is long, without arms or ribs, and with open journals, so that suction may be used to draw the cotton through the perforations in the cylinder.

Claim.—The constructing the screen so that the periphery of the metal intervening between any two immediately adjacent orifices shall be of a length equal to, or greater than, that of the staple of cotton, or other fibrous material to be picked, in order that the fibre shall not lap around the said periphery, and become connected, attached, or tied by its ends, as stated.

Also, the improvement of constructing the cylinder-screen of a hollow, perforated metal cylinder, without arms or ribs, and with open, hollow, cylindric journals at its two ends, as stated, in order that the cotton may be drawn out of one journal by the suction draught, and any obstruction removed by a person's hand and arm introduced through the other journal.

No. 10,579.—JOSEPH SAWYER.—*Improved Bench-hook.*—Patented February 28, 1854.

This invention consists in securing the socket to the bench by the same nut and screw employed to secure the hook to the socket.

Claim.—For securing the hook C to the socket A, by the same screw and nut E which fastens the whole to the bench.

No. 10,580.—WILLIAM SUMNER.—*Improvement in Organs.*—Patented February 28, 1854.

The object of the inventor is to have a stop or stops either for the bass or treble, which will sound only the extreme note on the left or right, without reference to the number of keys that may be touched at one time.

The invention consists in the employment of a wind-chest *b*, having one main passage leading from the bellows *c*, and branches *d*, *d*, *d*, leading therefrom to every pipe *l* in one or more stops, which branches are each governed by a valve *n*, which, when opened to admit the wind from the main passage, will, at the same time, shut off the wind from all parts of the main passage beyond it. Another object of the inventor is to operate the pedals which play the sub-bass, and sometimes

the basses, by the action of the keys *a*, so that the pedal K^1, corresponding to the extreme left key touched, will be operated. This is done by combining a wind-chest with a series of auxiliary bellows f^1, which in turn are combined and connected with the pedals and with the keys, so that on touching the keys, wind shall pass from the main bellows to the improved wind-chest, and thence into the auxiliary bellows to work the corresponding pedal, and sound the required note, the wind at the same time being shut off from all the auxiliary bellows beyond it.

Claim.—For the employment of a wind-chest having a main passage for the wind, and branches leading therefrom, and governed by valves, substantially as specified, and connected and combined with the keys, &c.

Also, in combination with a wind-chest operating on the plan described, the employment of auxiliary bellows connected and combined with the main bellows and pedals, &c.

No. 10,581.—SOLYMAN BELL.—*Improvement in Harvesters.*—Patented February 28, 1854.

The point of the invention consists in the rivet-head projections F on the under-surface of the cutter or sickle B, and a corresponding slot or depression *a* in the guard-fingers E, which are intended to remove the leaves and stalks, and prevent the guards from becoming clogged, so as to obstruct the motion of the sickle.

Claim.—The combination of the projections F with the depressions *a*.

No. 10,582.—GEORGE A. ROLLINS.—*Improved Tool-rest for Turning-Lathes.*—Patented February 28, 1854.

The drawing represents a vertical section through the cutting-tool. A represents the tool-post, B the cutting-tool, C the tool-holder, provided with a mortise *a* for the tool to extend through; D a screw for holding the tool in place; F a groove designed to receive a circular head G formed on the lower end of the tool-holder. This tool-holder is made cylindrical below the tool, and extending through a cylindrical hole made in the tool-rest that works upon the concave bearing *b*, and is fitted to correspond with the convex lower side of the movable block, in order that it may be turned in various horizontal directions, and in different inclinations to the horizontal plane, as partially shown by the dotted lines in the drawing.

Claim.—The improvement of combining with the tool-post and tool-holder a separate rest-block, in combination with making the said rest-block and the post, respectively, with convex and concave vertical bearing-surfaces, the tool-holder with a head or dovetail, and the tool-post with a curved trapezoidal or dovetail groove F, as specified, whereby the cutting-tool may not only be set to any angle of inclination, but the said tool and rests simultaneously confined in position by the downward action of the screw of the tool-holder against the tool, as described.

No. 10,583.—JOHN G. SNYDER and JOSEPH YOUNG.—*Improvement in Seed-Planters.*—Patented February 28, 1854.

The invention consists mainly in the combination of upper and lower valves I and O, having the former three and the latter two discharge-passages, connected together by the tubes *e f g*, intended to render the machine capable of hill and drill planting at pleasure, and to insure the regularity of deposite. There is also in the frame *x* of the hopper A an aperture *k*, which, combined with the inclined bottom-plate B of said hopper, is devised to carry off the surplus grain from the valves and into the bucket S placed inside of the hopper, and thus to prevent any irregularity in the deposite, which otherwise might occur by clogging the valves, passages, or tubes above mentioned, with superfluous seed.

Claims.—1st. The sliding-section *b* in the bottom plate or valve I, in combination with the tubes *e f g*, and revolving perforated plate or valve O.

2d. The aperture *k* in the frame *x*, in combination with the inclined form of plate B, to carry the surplus grain into bucket S, substantially as specified.

No. 10,584.—LINUS YALE.—*Bank Locks.*—Patented February 28, 1854.

This invention consists in the arrangement of the pins I I, the sliding-shaft D, the covering of the key-chamber with the broad head D^1, in connexion with the cog L, which prevents their being adjusted and turned by a burglar without the proper key.

No. 10,585.—JACOB ZOOK.—*Automatic Chuck.*—Patented February 28, 1854.

This invention consists in producing a self-acting carrier for lathes by means of projections *b b* attached to the carrier-plate D of the mandrel, which actuate levers situated and vibrating in an auxiliary plate A and yielding-bar B attached thereto. These levers operate excentrics F, fixed to the same vibrating pivots, and thereby cause them to press against and confine the material to be turned with a force produced by, and proportionate to, that required to hold the piece. This is essentially a self-centering chuck. The excentrics F yield to the piece until, by revolution, it settles or has its axis coincident with that of the mandrel.

Claims.—The combination of the projections on the carrier-plate D with the vibratory arms *m m* and excentrics F F, attached to the same pivots or their equivalents, situated and adjustable in, and combined with, the auxiliary disk A and bar B, arranged and operating substantially in the manner and for the purpose herein set forth.

Also giving a limited elastic play, longitudinally, to the bar B, in the disk A, by means of the slots and springs or their equivalents, in order that the pressure of the excentrics F F, against the article to be turned,

may be equalized, in case their bearing-points should, by the irregularity or excentricity of the article, be at unequal distances from the centre of revolution, which is determined and fixed by the conical point of the driving-shaft.

No. 10,586.—L. Otto P. Meyer.—*Improvement in Vulcanizing India Rubber and other Gums.*—Patented February 28, 1854.

The invention or claim consists in the heating or curing of the material commonly known as the hard compound of vulcanized caoutchouc, or other vulcanizable gums, by means of the immersion of the material in, or under, water or other suitable liquid, heated to about 300° Fahrenheit, during the process of curing. No illustration.

No. 10,587.—James F. Broadhead, assignor to Thomas Ritch.—*Saw-set.*—Patented February 28, 1854.

Claim.—In the forceps saw-set, the movable bed or anvil 1, operating conjointly with the levers 2, 3, enabling the operator to set the tooth of the saw from its point instead of from its base, as is usual in other forcep-sets.

No. 10,588.—Stephen P. Ruggles.—*Improvement in Printing Presses.*—Patented February 28, 1854.

Claim.—In combination with the curved arm L, for carrying the inking-rollers to and from the form, the spring-plates with the guides *h*, at each end of the rollers, for causing the roller to pass over the form in a plane parallel to the form, their general motion being in the arc of a circle.

Also, hanging the platen X and the intermediate ink-roller R to the same rock-shaft Z, by their respective arms Y and *u*, so that the vibration of the platen shall throw the intermediate roller, first to the grooved ink-roller Q, and then to the ink-bearer O, for the purpose of receiving and distributing the ink from the ink-trough at every vibration of the platen.

No. 10,589.—William Burnett.—*Fusible Plugs or Disks for Steam Boilers.*—Patented March 7, 1854.

The invention consists in the arrangement of two disks of fusible metal, one of them, J, fixed in a tube within the boiler, being subjected to the pressure of steam on both of its sides; and the other disk, I, fixed in another part of the same tube, without, but remote from the boiler, by which arrangement the pressure of the steam is admitted on both sides of the interior plate.

The object of this invention is to insure that the disks will melt with great certainty, thereby preventing the liability of their being forced from their seats by the pressure of the steam before the fusing point is attained.

No. 10,590.—Isaac Hussey.—*Improvement in Machines for Plastering.*—Patented March 7, 1854.

A mortar box G, shown in section fig. 2, is provided with a piston for regulating the supply of the mortar, a trowel L, and cut-off, moved by the lever O.

The mortar box is attached to an adjustable frame *c*, and the various movements are regulated by the cords, as shown in the drawing.

The figure is represented as arranged for plastering overhead, but can be changed so as to plaster a side-wall.

Claim.—The arrangement of the several parts of the machine substantially as described.

No. 10,591.—Caleb Cook.—*Valve Gearing for Locomotives.*—Patented March 7, 1854.

This invention consists in the arrangement of the open lever G, with two recesses *a* and *b*, and connected to a rocker-shaft E, and applied to, and made to operate with respect to, the excentric and the valve-rods H and C', as shown.

No. 10,592.—Warren Gale.—*Straw Cutter.*—Patented March 7, 1854.

The invention consists in fitting an adjustable gauge to the cutting-box. The elevation of the gauge above the fixed knife will vary with its distance from the said knife. so that when the length of the cut is increased, the height of said gauge is increased in the same proportion; and, as the applicant alleges, the tendency of the straw to jam between the gauge and knife is diminished.

In the figures, H I I show the movement of the gauge G to vary its distance from the fixed cutter C, and the action of the movable knife D is also understood from inspecting the figure.

The claim is to the arrangement of the adjustable gauge as described.

No. 10,593.—William G. Philips.—*Improved method of Opening and Closing Gates.*—Patented March 7, 1854.

This invention consists in providing the gate-post or pivot, and the platform, with springs, so arranged that when a vehicle passes upon the platform, in either direction, the gate opens to the extent of one fourth part of the circle, and when it has passed through to the opposite side of the platform, it is carried round to the extent of another fourth. In the drawings, A designates the platform, which supports the whole working apparatus, and is of sufficient width to admit the passage of a carriage on each side of the gate-post B. The gate is hung at its centre, and is kept in its place by a bolt passing from the top of the post B, through the cross-beam D, which is supported by two uprights on each side the platform. and by two friction rollers *c*, that run upon inclined planes on each side of the gate-post, which

planes rest upon a pivot, and extend one-fourth of the circle, while they have play of about one half that extent. Projecting from the bottom of the gate-post is a plate *i*, situated immediately above the end of the lever *g*. When the carriage comes upon the platform, the wheel is caused to press down the lever *b*; and this pressing upon the lever *g*, acts upwards upon the plate *i*, and raises the gate, which places the friction roller *c* upon the upper side of one of the inclined planes, when the gate moves round the fourth of a circle, allowing the carriage to pass; after having done which, it presses upon the other end of the lever *b*, and causes the gate to move another fourth of a circle, and it is then closed.

The gate is also made to act by placing a weight upon the pin *x*, that projects upwards from the gate-post; or it may be done by a crank attached to the same, having a cord and pulley passing over and within one of the gate-posts, so that the cord may be wound around the crank.

Claim.—The double-span rotating gate, opening and closing continually forwards by means of levers and inclined planes, as well as by pulleys and cords, combined and arranged as herein set forth.

No. 10,594.—Joel P. Heacock.—*Improved apparatus for Rounding and Bevelling Barrel-Heads.*—Patented March 7, 1854.

The distinctive features of this machine are, that it rounds and bevels the heads of barrels of any thickness, and all diameters, with perfect accuracy and great rapidity. This is accomplished by means of a V-shaped cutter, properly secured in a two-pronged swinging lever, in connection with semicircular clamping-jaws for holding the stuff. A transverse vertical section of the machine is represented, in which F points out the two-pronged swinging lever, with the double-edged cutter G secured therein. B C represent the clamping-jaws, and D the stuff to be prepared for the barrel. The material of which the head is to be formed being secured, the lever is brought from a vertical to a horizontal position, when all that portion of the stuff that has passed under the cutter is rounded and bevelled. Raising the lever to a vertical, and again bringing it to a horizontal position, by a reverse motion, a similar result follows, and one half of the head is prepared.

Claim.—Rounding and bevelling a barrel-head at one operation, in a very true and perfect manner, by the employment of a double-edged adjustable cutter, secured in a swinging frame, or forked lever, and moved from a vertical to a horizontal position, and *vice versa*, back and forth from one end of the stuff to the other, in combination with the clamping-jaws for holding the stuff in a proper position while being operated upon, substantially as herein fully set forth and described.

No. 10,595.—G. W. Cooper.—*Improvement in Cotton-seed Planters.*—Patented March 7, 1854.

The device consists in a vertical rotary agitator OOO, placed within the hopper A, and combined with vertical saws G G, to carry down the cotton-seed; the agitator and saws being set in motion by the spur driving-wheel M and levers K J.

Claim.—Combination of the saws G G, having a reciprocating rectilinear, and the feeders O O O, having a reciprocating rotary motion.

No. 10,596.—HENRY B. KIMBLE.—*Sash Fastener.*—Patented March 7, 1854.

The invention consists in the combination of the bolt *c*, having the locking notch at *d*, with a weighted lever A.

No. 10,597.—WILLIAM H. JOHNSON.—*Improvement in Sewing Machines.* Patented March 7, 1854.

This invention consists in the making of what is denominated the "belaying double-loop stitch," with a single thread, by the employment of one needle, used in connection with a double spring hook, over which the loops are formed, the needle working vertically and having a vibratory side-motion, so that each time it passes through the cloth, or other material to be sewed, the latter is moved forward a sufficient distance for the succeeding perforations; thus constituting a machine which forms the seam by means of a single thread, and feeds by the needle.

The drawing shows the construction of the machine, a description of which would occupy too large a space.

Fig. 1 is a side view of the machine; fig. 3, a front view; fig. 2, a rear view; and fig. 5, a top view of the same: fig. 4 is a detached top view of the lever L.

Claim.—The making of a seam with a single thread, by the combination of a single thread *m*, forked hook *n*, and expanding lever D^1, operating substantially in the manner and for the purpose herein specified; also, the forming or making of a seam from a single thread, by the running of a loop of the thread through the material to be sewed, the running of a second loop through the material and putting the first loop through the second; the running of a third loop through the material and through the first named loop, the carrying of a fourth loop through the material and putting the third through it, and so on; putting the first loop through the second and around the third, the third loop through the fourth and around the fifth, and so on, forming the belaying double-loop stitch herein described, in the manner set forth; also, the feeding of the material to be sewed by means of a vibrating needle, by which the material is moved along as required for the stitch, substantially in the manner herein specified.

No. 10,598.—GEORGE C. HINMAN.—*Improvement in Sash-sustainers*—Patented March 7, 1854.

An arched rod C, with clogs or bearing-pieces I, presses outwards against the frame and sustains the window *w* in any required position. The thumb-piece G is a lever, working on the projection E of the bracket D; by pressing upon it the inner end increases the bend of C, so as to relieve the side-pressure, and allow the window to move.

Claim.—The above described sash-sustainer, consisting of an arched rod attached to the horizontal part of the window in such a manner that the weight of the sash shall cause the clogged ends of the rod to bear equally on both sides; and also the above described lever thumb-piece for increasing the arch of the rod, and relieving the pressure so as to allow the window to be lowered, the whole being arranged and operated substantially as above described.

No. 10,599.—GEORGE LEVAN.—*Improvement in Reeling Machines.*—Patented March 7, 1854.

This invention consists of a double disk with hinged wings to keep the threads stretched, in combination with a sliding rail to stop any division of the spindle.

In the figure, H is the double disk attached to the spindle B. There are six or more vertical pins J dividing the plates H, and between two of the pins J a thread passes. A wing L operates upon a hinge between two of the pins J, for the purpose of keeping the threads properly stretched; and also when a thread is broken or a bobbin empty, the lever L flies back against one of the pins J, by the revolution of the double disk H, and is brought in contact with a projection M upon the sliding-rail N, which stops the spindles and reel of one division without delaying the operation of the remaining division.

Claim.—The double disk H, as constructed with hinged wings L, for the purpose of keeping the threads regularly stretched, and operating the sliding-rail N, when one of the threads is broken, in the manner described.

No. 10,600.—SAMUEL LOVELAND.—*Improvement in Sectional Dry-docks.* Patented March 7, 1854. Antedated September 7, 1853.

A central water-tight tank C, seen in the drawing, is used for the double purpose of ballasting with water and, when empty, for giving access to the keel.

A mere water-ballast is disclaimed, as also a space between separate floats.

Claim.—The transversely placed tank or water chamber, C, of each section of the dock, forming not only a central water-ballast in the float directly under the keel of the vessel to be raised, but, when empty, a dry tank for the purpose of giving access to the keel in repairs.

Also the tank, trunk, or chamber C, in combination with the buoyant chambers or floats A A, hollow guards or chambers B B, or when combined with chambers or floats attached to the end of the trunk or float.

No. 10,601.—Cancelled.

No. 10,602.—L. B. TYNG.—*Improvement in Tail-stocks, for Turning Lathes.*—Patented March 7, 1854.

This improvement consists in a divisional guide-box, made of iron

of turning-lathes. This is represented in the drawing, which is a vertical longitudinal section of a tail-stock of an engine-lathe containing the improvement, by the letters *g*, *g*, *g*, *g*, and is adapted for the use of a round or square spindle, as may be required. They are planed or bored, according to the shape of the spindle to be used, and planed on their edges by one and the same operation; and are then clamped together in pairs, and ground to a finished surface on the spindle, and accurately turned so as to fill the entire cavity previously bored out of the upper portion of the lathe marked B; the closeness of their fit retaining them in their places.

Claim.—Constructing and applying guide-boxes, substantially as herein described, to the tail-stocks of lathes, which make a better, cheaper, and far more durable bearing than those made heretofore for such purposes.

No. 10,603.—R. J. R. STONE.—*Improvement in Machines for Boring and Mortising Carriage-Hubs.* Patented March 7, 1854.

A A indicates a sliding frame that moves longitudinally upon the ways of the lower frame A^1, and is drawn either forward or backward by means of the bevel-wheel S, on the screw Q, that reaches into another bevel-wheel S^1, on the shaft T, put in motion by a crank; to which are also attached the devices for boring and mortising, while the hub to be bored is secured upon the lower frame. The dial plates G, which indicate the number of mortises to be made in each respective hub, are attached to the shaft E, on the lower frame, and are governed by the hand of the operator, by means of the catch F and the guide F^1. The hub to be bored and mortised is placed between the two chucks B B^1, which are forced into the core of the hub, by means of the screw C, which has a crank at one end, and passes through a box in the yoke D, that slides upon the ways on A^1. This being done, the auger H is set in motion by means of the crank on the shaft J, operating a bevel-wheel I^1, that meshes into another bevel-wheel on the shank of the auger. M is a quadrant lever, attached to the guides L L, for the purpose of giving to the chisel any deviation from a perpendicular line that may be required.

Figure 1 represents an elevation of the machine; figure 2, an end view of part of the machine.

Claim.—The combination and arrangement of the chisel and quadrant lever M in the manner specified, for the purpose of beating out the mortise at any desired angle, as indicated by the index, in connexion with the sliding frame A A, in the manner and for the purpose herein set forth.

No. 10,604.—JOSEPH SOLLENBERGER.—*Improvement in Carriage Brakes.* Patented March 7, 1854.

Claim.—The mode of applying the fore and hind-wheel rubbers by means of the connexion *m*, *n*, applied to the fore-rubber *l*, as described; and in connexion therewith, the connexion J, applied to the hind-rub-

bers R, as described, so that the fore-wheel may be acted on in the rear, and the rear-wheel in front.

No. 10,605.—JAMES W. STOAKES.—*Machine for Paying Vessels, Seams or Joints.* Patented March 7, 1854.

This improvement in paying-machines consists in the construction of the rotary mop B, by the combination of the two sectional disks A A, provided with hollow arms or axes C C, through which passes a bolt D, having a nut F, by which the disks are secured together, and the mop retained in place at the periphery.

No. 10,606.—CHAUNCEY D. WOODRUFF.—*Improvement in suspending Eaves Troughs.* Patented March 7, 1854.

The trough D is suspended by the strap C, fastened to the rod A, and adjustable on it by the screws B B.

Claim.—The mode of suspending and fastening eaves-troughs as herein described.

No. 10,607.—LUTHER B. FISHER.—*Improvement in Corn-Planters.*—Patented March 7, 1854.

The invention embraces two distinct features—one being the construction of the driving wheel E, of an adjustable twin hub H H^1, and of a double set of radii R R, by means of which the periphery of the wheel, which for this purpose has an opening, *e* e^1, in its rim, may be enlarged or diminished so as to cause the seed in the several hills of every succeeding row to be planted in right lines across the field, as well as in the direction of the planting. The divided hub, H H^1, is movable longitudinally upon the shaft C, by levers I I^1 and screw S, so that by the turning of said screw, the circumference of the wheel E can be diminished or increased at pleasure. The second device is a scraper P, made self-adjustable through the connexion of arms *n n* with the levers I I^1, with reference to the periphery of the wheel, for cleaning the outer rim of the wheel E.

Claims.—1st. Constructing the driving wheels of planters with cut rims and divided hubs, substantially as described; said hubs being made to traverse the driving shaft C, by means of forked levers I I^1, operated by a screw S, or its equivalent, for regulating the allignment of the hills in a cross direction.

2d. The scraper P, in combination with the pins *p* and *q*, and levers I I^1, arranged and operating substantially as described, for presenting a given space between the edge of the scraper and the outer rim of the wheel.

No. 10,608.—JEREMIAH C. GASTON.—*Improvement in Seed-Planters.*—Patented March 7, 1854.

The improvement consists mainly in an agitating cord, N N, made to vibrate horizontally in the bottom of a portable seed-hopper A, by

means of a slide F, moved back and forth by the carrier. This cord is attached to the slide by the loop P; the roughness is intended to stir the grain about, and to insure the discharge thereof through the adjustable planting apertures D D.

The claim is restricted to the reciprocating agitator N N.

No. 10,609.—CHARLES MILLER.—*Improvement in Sewing Machines.*—Patented March 7, 1854.

This invention relates to the adaptation of the cloth, or other material to be sewed, to receive what are termed the button-hole stitch, the whip-stitch, and the herring-bone stitch; and consists in giving the cloth, or other material to be sewed, a movement laterally to the direction of the seam, and in opposite directions alternately between every two stitches, in addition to the movement commonly given in the direction of the seam.

Claim.—Giving the cloth, or material being sewed, a movement laterally to the direction of the seam, between the successive stitches, or interlacings of the needle and shuttle-threads, for the purpose of receiving different kinds of stitches or seams.

No. 10,610.—CLARK POLLEY.—*Improved method of operating Hydraulic Rams.*—Patented March 7, 1854.

This improvement consists in so arranging a hydraulic ram and an ordinary suction-pump that they shall serve to elevate water to a considerable height, thus overcoming the great expense and inconvenience often incident to the use of forcing-pumps, and resulting in the attainment of a degree of power unattainable in using the forcing-pump alone. The drawing shows a sectional view of the apparatus. The inventor does not claim, in any manner, the pump or hydraulic ram; but the air-tight box or chamber A, having within it, and in combination therewith and with each other, substantially as herein set forth, the hydraulic ram and pump, and having suitable pipes attached in such manner as that when the apparatus is submerged, and the pump worked from above, the ram will be free to operate by the pressure and momentum of the water resting above it.

No. 10,611.—DAVID B. MARKS.—*Improvement in Artificial Legs.*—Patented March 7, 1854.

The invention and claim consist in the combination of the rod D, which is attached to the foot C, and moves upwards and downwards within the leg or lower part, B, of the limb; the spring *d* applied to the rod; and the curved bar-plate or way, E, attached to the thigh or upper part, A, of the limb—the whole operating substantially as described—to lock the knee stiff, and control the position of the foot until the ankle is bent on throwing the body forward, and to retain the foot in its bent position at the ankle until the knee is again straightened.

No. 10,612.—SEAMAN C. RIPLEY.—*Improvement in Brick-Machines.*—Patented March 7, 1854.

S represents the brick-mould, which is forced under the clay or moulding-box by traversing bar I. P represents the gauge-plate or stop against which the end of the mould strikes when put in its place by the hands of the workman.

The stop turns on a pivot *u*, and allows the bar I to pass freely over it, by depressing the end *v* as it advances towards the clay-box; and on the return of the bar it acts upon the tail *w* of the top, and throws it back to its first position.

The inventor does not claim broadly the use of a gauge for guiding the moulds in entering under the grating, as such a gauge, provided with a weighted lever for throwing it back to its place on the backward movement of the force-bar, has been used in the machine of Collins B. Baker, patented March 26, 1850.

Claim.—Throwing the gauge back to its place by means of a tail or cam, or the equivalent thereof, upon which the force-bar acts on its backward movement, substantially as herein described.

No. 10,613.—JOSEPH SAWYER.—*Improvement in Machines for Splitting Ratans.*—Patented March 7, 1854.

The principal feature in this invention consists in so dividing the ratan to be used for seats of chairs, &c., that the natural enamel shall not be removed—thus preserving the original strength of fibre to a greater extent than by the ordinary modes of splitting. B B^1 the feeding-rollers, carried by the shafts C C^1, which are driven by the pulleys D D^1, the lower shaft C running in stationary boxes in the frame; and the shaft C of the upper roller having a slight vertical motion in a slot, to enable the rollers to accommodate themselves to the size of the cane. The shafts C^1 have also a motion in slots, and are connected together by the links *b c d*, shown in dotted lines; *c* being pivoted at its centre, and connected at its ends with the other two. E is a spring that bears against the link C, in such a manner as to bring the rollers B^1 together. As the cane is forced in between this pair of rollers, they are allowed each to move an equal distance from the centre of the line; and thus the centre of the cane is made constantly to correspond with that of the cutter F, which is so formed as to split the cane into four or more equal portions without abruptly bending it at any point. G is the cutter-stock, in which F is secured by the screw *g*.

Claim.—The combination of the feed-rollers B B^1 with the cutter, constructed and operating as described.

No. 10,614.—ADDISON M. SAWYER.—*Improvement in Machines for Splitting Ratans.*—Patented March 7, 1854.

The essential characteristic of this invention consists in a tubular cutter I, of a peculiar form and operation, the cutting edge of which is made annular, and the outer surface provided with a series of spurs

arranged around it, as shown in fig. 3, in connexion with a guide at M, that directs the stick to the feeding-rollers B, and another guide H, that presents the stick centrally to the cutter, so that its circumference shall be divided into separate portions, while the central part passes through the interior of the cutter.

The drawings present a plan, fig. 1; a vertical section of the machine, taken immediately in the rear of the guide-stock H, and through the cutter I, fig. 2; and a transverse section of the cutter, with the standard K, and the fender L, which directs the strands upwards from the under side of the stick. A represents the frame; B B are feeding-rollers, arranged in pairs upon the shafts B^1, and working in boxes attached to the frame, the upper one of which, C, may be drawn together by the helical openings D, pressed upon by the nut *b*, thus forcing the rod *d* downwards, and operating the links *c*, the lower ones working upon pivots to permit the vibration of the shafts B^1, and thus accommodating the machine to larger or smaller sticks. Upon the shaft B^1, and in the lower part of the machine (some of the feed-rollers B being removed,) may be discovered the pitch-wheels E, that correspond in number with the feeding-rollers, take into the endless pitch-chain F, and give to all the feeding-rollers an equal and corresponding motion. This chain is tightened by means of suitable devices attached to the pitch-wheel G^1. *h, h, h, h*, show the position of four movable disks in the guide-stock H, which are arranged in pairs, and in such manner that they have the same amount of movement to and from the centre, and have their faces bevelled on the side opposite to the cutter. These disks are pressed against the stick by the spring *g*, arranged upon the periphery of the guide-stock, one of each pair having an arm that engages with a small balance lever, thus insuring an equal and regular movement.

Claim.—In a machine for splitting ratans or other similar substances as described, the employment of a tubular spurred cutter, or its equivalent, in combination with a guide for holding and guiding the stick thereto, substantially as hereinbefore described.

No. 10,615.—William Wickersham.—*Improvement in Sewing Machines.*—Patented March 7, 1854.

Claim—Consists more properly in so combining with one sewing-machine, having one needle and a thread-carrier, or their mechanical equivalents, another or second needle, and a second hole in the thread-carrier, or the equivalents therefor, that, by the action of the same needle-moving machinery, two needles are made to operate simultaneously, so as to perform at one and the same time two parallel rows of stitches, with separate threads, substantially as hereinbefore specified.

No. 10,616.—Robert W. Andrews.—*Britannia Tea and Coffee Pots.*—Patented March 7, 1854.

The object of this invention is to prevent the projecting ledge at the bottom of a Britannia tea-pot from being melted when exposed to heat, and consists in substituting a projecting ledge, B, made of other metal, which is not melted by ordinary degrees of fire-heat.

No. 10,617.—JESSE YOUNG.—*Improved Joint for Air-heating Pipes.*—Patented March 7, 1854.

The improvement consists in boring out recesses *a a* in the ends of the pipes, which are sufficiently large to receive a thimble, *c*, the thimble being made of more expansible metal than the pipes, and which, upon being heated, will, in consequence of expanding more than the pipes, bind tight against the recesses, *a a*, in which it is fitted, and form a perfectly tight joint.

No. 10,618.—WILLIAM C. WRIGHT.—*Improvement in Machines for Drilling Stone.*—Patented March 7, 1854.

The drill-stock O is lifted and dropped by a pair of jointed clamp-bars, N, alternating with another like pair of clamp-bars, N^1, these clamp-bars being operated respectively by connecting-rods M M^1 and cranks K K^1. The cranks are geared together so as to revolve with equal velocity, in directions diametrically opposite to each other. Each pair of clamp-bars is unclamped from the drill stock at the end of its lift, by means of a tail, *d*, coming in contact with the top end of a slot, *e* or e^1, in an upright, R, the other pair being at the same moment held unclamped at the lower end of its motion, by resting on a fixed stop, S or S^1, and the drill-stock is thus left free to descend. The action of the crank is transmitted to the connecting-rods M M^1, by means of slotted cross-heads L L^1, whose slots are bent in such a manner as to prolong the lift of either pair of clamp-bars, and leave time for the descent of the drill-stock between the unclamping of that pair and the reclamping of the other pair, at the commencement of its lift.

The turning of the drill-stock about its own axis is effected by means of a pawl, *g g*, which catches the tail *d d* of the clamp-bars as it approaches the upper limit of its motion, and causes it to make a slight motion of revolution.

Claim.—The combination of mechanism herein described for operating the drill-bar, consisting of two pair of grippers, N N^1, attached to rods M M^1, having slotted heads L L^1, which receive the wrists, $f f^1$, of two cranks, K K^1, the said cranks being arranged diametrically opposite each other, on a common axis, and the slots in the heads of the gripper-rods being of such form as described, so as not to cause one set of grippers to be always rising, while the other pair are descending, but to cause a cessation of motion before any descent, in order to give time for the drill-bar to fall, as herein set forth.

No. 10,619.—ASHLEY HOTCHKIN.—*Improvement in Hinging Gates.* Patented March 7, 1854.

This improvement consists in hinging or hanging a gate, by means of two lower turning pivots or pintles e^1, e^2, working on separate step projections, a^1, a^2, of a box or frame G, the upper end of the gate being steadied and carried by rollers *f*, *g*, *h*, working or travelling in fixed grooves or spaces, so as to admit of the gate opening either way, the

several parts being constructed and arranged essentially as shown. Fig. 1 and fig. 2 show the boxes J and G on a larger scale.

No. 10,620.—DANIEL RYAN and JOHN FLANAGAN.—*Improvement in Water-closets.*—Patented March 7, 1854.

This is one of those water-closets in which the basin is surrounded with an annular chamber at its top, from which is discharged a sheet of water down the basin on all sides, for the purpose of washing it out. The patentee has divided this chamber, by a ring or plate J, into two compartments *d*, *e*, which communicate only by small perforations in the plate J, or spaces at its side. The water is let into the lower compartment *e* in the usual way, by a feed-pipe K; but it gradually finds its way into and fills the upper compartment *d*, and then, on the supply being cut off, it is there retained for a little time, until the valve at the bottom of the basin has been closed, when, gradually making its way through the opening in J, it descends to the bottom, and forms an air-tight water space around the joints of the valve.

The valve described by the patentee consists of a hollow cylinder F, sliding vertically in another hollow cylinder A, and provided with perforations *a b*. When F is raised by means of the lever G, the opening *a* is brought opposite to the pipe C, and the pipe D is cut off from communication with C. The cylinder F receives the contents of the basin, and, on being let down, discharges them through *b* into the pipe D, and closes the passage through C.

The patentee does not claim the chest or penstock I, surrounding the upper part of the bowl-seat, as that has been previously used.

Claims.—1st. Dividing the chest or penstock I into two compartments, communicating with each other, the division being made by means of a flange J, or its equivalent, by which a sufficiency of water is reserved within said chest or penstock after the supply has been stopped, to cover the opening or mouth of the pipe C, at the bottom of the bowl-seat B, and effectually prevent the escaping of effluvia into the apartment.

2d. The sliding-tube F, within the trunk or cylinder A; said tube being constructed, arranged, and operated as shown, by which a direct communication is at all times cut off between the bowl-seat and exit pipe, and at the same time the excrement allowed to pass into the exit pipe at the proper time.

No. 10,621.—JOSEPH WILSON.—*Improvement in Self-acting Switches.*—Patented March 7, 1854.

The movable rail C^1 is pressed out by the flange of the wheel while the cars are on C^1, and the switch rails *a b* are moved to meet the track C C^1.

The inventor does not claim the spring for restoring the line, nor the locking lever, nor moving the switch by a bar forming part of the track.

Claim.—The precise arrangement of the parts for operating the switch, by means of the lateral pressure of the wheel flanges on the inner sides of the movable and fixed rails, while the cars are on the rails.

No. 10,622.—CHRISTOPHER HODGKINS, assignor to NEHEMIAH HUNT.—*Improvement in Sewing Machines.*—Patented March 7, 1854.

This invention consists in a peculiar arrangement of the eye of the upper or vertical needle, together with a peculiar mode of forming and operating the lower needle, and has reference to machines which sew by the conjoint operation of two needles, one of which passes through the cloth, while the other works on one side of it.

In the figure, A is the upper needle, the eye of which is bored through in a direction parallel to the axis of the driving-shaft; B is the lower or horizontal needle. The upper needle is made to puncture the cloth, and is attached to a carriage C, that is worked up and down by means of a bent lever and a cam, the latter being fixed on the driving-shaft F.

Claim.—Constructing the horizontal needle of the angular form, substantially as described, and making it to operate with respect to the vertical needle and its eye, arranged as set forth, essentially in the manner as hereinbefore explained.

No. 10,623.—THOMAS CLEGG, assignor to THOMAS CLEGG and NATHANIEL STEVENS.—*Improvement in Wire Heddle-eyes for Looms.*—Patented March 7, 1854.

This invention consists in so compressing the wires of which the eyes are made, at the top and bottom of the eye, as to flatten them and bring them to about the thickness of a single wire. This compression may be produced by pressure between jaws, or by a hammer. The object of the flattening is to prevent the eyes from catching the warp threads in the twist. The drawing shows a view and section of the metallic heddle-eye made in the improved manner.

Claim—As an improvement or improved manufacture, a loom harness metallic eye, made of round wires twisted together, and compressed and flattened in the twist of its wires, and directly at the top and bottom of its warp-thread opening, substantially in the manner and for the purpose as described.

No. 10,624.—GEORGE B. FIELD.—*Improvement in Rotary Cultivators.*—Patented March 14, 1854.

The invention is confined to the contrivance of movable scrapers or cleaners A, for every rotating hoe or cultivator-tooth C, which cleaners slide out and in radially on the hoes as the machine progresses, and thus by their gravity keep the tooth clean. To keep the inside of the cylinder formed of the hoes and scrapers clean from the dirt entering into it, and to prevent the clogging of the axle and of the ways on and in which

the cleaners slide, shields P and Q are fixed on the axle L, which lead the dirt out of the cylinder by their inclined position. There is also suspended to the rear of the revolving cultivator, and in advance of a seeding apparatus S, an adjustable harrow B, sustained above ground, which by its rotation breaks and pulverizes the clods falling from the rotary hoes.

Claims.—1st. The construction of the rotary cultivating cylinder, made of cutting-plates or spades C, and interposed pushing or clearing boards.

2d. The arrangement of the shield-plates P and Q, on the shaft L.

3d. The rotary harrow B.

In figure 1 the cleaners and rotating hoes are represented with their slots F; but the axle L, with the shields P and Q, are omitted in this figure, to make the drawing more intelligible.

No. 10,625.—Oliver Lesley.—*Saw-set.*—Patented March 14, 1854.

Properly a swage saw-set, for setting and sharpening or pointing chisel-shaped teeth. The invention is one of arrangement only; and the claim allowed covers the arrangement of the triangular gauge C, in relation to the swaging notch F of the set; so that while the gauge rests upon the face or edge of one tooth to steady it, it may also be graduated to make the curved line of the tooth.

No. 10,626.—Orrin Newton and J. A. Crever.—*Improvement in Excluding Dust from Railroad Cars.*—Patented March 14, 1854.

This invention consists in ventilating railroad cars by supplying them while in motion with a continual current of atmospheric air, previously purified by its passage through water.

This is effected by means of bellows, operated by the engine, which force a current of air into a water-cistern arranged with a series of tubes opening into the cars. In the accompanying drawing, A is the bellows and water-cistern, which are placed under the body of the car; and B the tubes, which lead into and have openings communicating with the interior of the car.

Claim.—The combination of the bellows and water-cistern, connected with each other and with the cars by pipes, for the purpose of ventilating railroad cars, constructed and operating in the manner hereinbefore described.

No. 10,627.—Andrew Overend.—*Machine for Damping Printing Paper.*—Patented March 14, 1854.

This machine has two rollers, L and M, covered with felt or blanket. The lower roller M is made to revolve in a trough of water, which is imparted by means of the felt cover to the upper roller L. The paper is passed from an adjustable table G H, intermittingly between the roller, by means of which both sides are wetted during its passage through the

machine. It is then piled, by means of the fingers P, P^1, P^2, P^3, on a receiving table.

Claim.—1st. The self-acting feed-board, arranged and operating as herein described.

2d. The arrangement and combination of the upper and lower felted rollers, for the purpose of saturating the upper roller, in the intervals between the passage of the paper, in the manner as hereinbefore described.

3d. The projections *c c*, for the purpose of breaking the bead as the paper enters.

4th. The combination of the wetting cylinders and fly, substantially as hereinbefore described.

No. 10,628.—JOSEPH W. ROBINSON.—*Improvement in form of Scythes.*—Patented March 14, 1854.

The improvement consists in starting the web of the scythe from the middle of the back, instead of from one edge of the back, as is usually the case, thus rendering the scythe stronger, and preventing its being ground through in the line where it joins the back.

The claim embraces the form described, whether the web starts from the centre of the back or elsewhere, except from the edge.

No. 10,629.—EDWIN MILFORD BARD.—*Improvement in Mould-Boards for Ploughs.*—Patented March 14, 1854.

The invention is confined to studding the surface of the mould-board C of a common plough with knife-blades B B B, with the edges looking forward, and the axis of the blade sloped backward, so that while the blades cut and cultivate the under surface of the furrow-slice, they at the same time slide through it without clogging.

The claim is restricted to the device precisely as described.

No. 10,630.—JAMES BERRY.—*Improved Method of Constructing Moulds for Making Printing-Blocks.*—Patented March 14, 1854.

The nature of the invention consists in forming moulds into which the printing-blocks are to be cast, of rectangular or other shaped prisms of a suitable size, and of two different lengths. These types, or prisms, are set up to form the moulds in such a manner that the short ones shall form the sunken parts of the mould, and the long ones the raised portions, so that when the material of which the block is to be formed is cast into the mould, the elevated portions of the mould shall form the depressed portions of the block, and the depressions in the mould shall form the raised or figured portions of the block.

The blocks may be of any suitable composition, such as type-metal, plaster of Paris, clay, or mixture of shellac and fine sand, vulcanized India rubber, or gutta percha.

Figure 1 is an isometric view of the mould, as set up preparatory to casting a block.

Figure 2, the two-sized types of which the mould is formed.

Any number of patterns may be produced from a small quantity of type in a comparatively short space of time, and with great economy of material.

No. 10,631.—R. D. BARTLETT.—*Machine for making Shovel Handles.*—Patented March 14, 1854.

The drawings in this case are so numerous and complicated, the description so extended in detail, and the model having been divided to apply to two applications, as to preclude in this place any clear representation of the invention.

The claims are to such a combination of stationary and rotary cutters as will completely finish the hand-part of shovel handles.

Claims.—1st. The combination and arrangement of the bed M, the rotary holder O, one or more vertical movable cutters V W H^1, and one or more stationary cutters I^1 K^1, as made to operate together, and form the D or head part of the shovel-handle, substantially as specified.

2d. The combination of the curved knife *o*, and the arc knife *p*, so applied together as not only to allow them to be separated for the purpose of being ground, but to enable them to cut out the opening of the shovel handle as specified.

3d. The combination applied to the shaft of the rotary holder and gear-wheel A^1, for the purpose of operating the holder; the said combination consisting of the cam-blocks C^1 M^1, the arm L^1, the spring-bolt N^1, its cam P^1, and the two studs e^1 and h^2, the whole being constructed and made to operate together, substantially as specified.

No. 10,632.—CHARLES W. BILLINGS.—*Improvement in Seed Planters.*—Patented March 14, 1854.

The invention consists—

1st. In the combination of an adjustable draught-pole F with a covering sledge G, in such way as to regulate simultaneously the depth of the furrow cut by the share I, through the position imparted to said sledge G by the arms *g*, which connect it to the draught-pole F.

2d. In a pair of mutually mashing toothed disk-segments B B, having a vibratory movement for the operation of the slides *b b*, admitting the seed from the hopper A into the tube C.

3d. In the mode of keeping the pivots of said segments B B at their centres of motion by means of a jointing-pin *x*, with projecting ears or lips, and by forming the joint-hole of a key-hole shape, (fig. 5,) thus admitting of an easy detachment of the segment whenever needed.

4th. Slides *e f* placed under the seed-distributing slides *b b*, for the purpose of keeping them in place, and preventing clogging.

Claims.—1st. The linking or otherwise equivalently attaching the pulverizing gauges G to the draught-bar F, in such a manner that the gauges are raised or lowered to regulate the depth of furrow to be cut, by elevating or depressing the draught-bar F to its proper pitch or height for the draught at the given depth of furrow, and whereby the draught-bar and gauges are simultaneously raised or lowered.

2d. The combination of the vibrating seed segment slides B B, geared together by cogs or teeth on their peripheries, and operating in unison, as described.

3d. The manner of pointing, pivoting, or jointing the vibrating segments at their centres of motion, by constructing the jointing-pin with projecting ears or lips, and forming the joint-hole of a key-hole shape.

4th. In combination with seed-distributing slides, the employment of the double-acting spring clearing-slides *e*, arranged so as to be capable of lateral movement in either direction, and made self-adjusting to their original positions, substantially as, and for the purposes, specified.

No. 10,633.—JOSHUA CROSS.—*Improvement in Faucets for Measuring Liquids.*—Patented March 14, 1854.

The peculiar advantage of this article arises from its combining a measuring-vessel with the valve of a faucet, in such manner that when the former is placed in one position, it shall be in communication with the interior of a barrel, or other vessel, whose contents are to be discharged and measured; and on being turned in another direction, the communication with the barrel shall be cut off, and the measure emptied. A indicates the shank of the faucet, which is furnished with a sleeve or valve B, upon which to screw the measuring vessel C. The shank has two apertures, *d*, *e*, which are opposite to each other, and are separated by the diaphragm *f*, that passes diagonally between them. The sleeve B is kept in its place by the nut C.

Claim.—The construction and arrangement of a measuring-vessel, and the valve of a faucet, substantially as herein described.

No. 10,634.—FREDERICK ESPENSCHADE.—*Movable Nozzles to the Exhaust Pipes of Locomotives.*—Patented March 14, 1854.

The claim allowed in this case is to the employment of movable tapering nozzles, *a*, *b*, *c*, of various sized orifices; so arranged, that either of the said nozzles may, at will, be brought over the mouth of the waste steam-pipes B, B, to vary the draught in the furnace of the locomotive.

No. 10,635.—E. S. HASKINS.—*Improvement in Spring Clamps for Clothes-lines.*—Patented March 14, 1854.

Claim.—The inventor does not claim uniting the two parts of a clothes-pin by a hinge, and closing the jaws by introducing a spiral or other spring between the opposite ends of the levers.

But he *claims* the combination of the barrel C, the groove D, and the elastic band *g*, of India rubber or other suitable substance, by which means the different parts of the clothes-pin are held together securely by the same spring which closes the jaws, instead of requiring a separate device for the purpose, as has heretofore been the case.

No. 10,636.—Elbridge G. Hastings.—*Improvement in Machine for Dressing Stone.*—Patented March 14, 1854.

The cutter-stocks I K, carrying the cutter *m*, extend the whole width of the stone to be dressed, and slide on inclined ways G G. These ways are confined, by straps *l*, to a fixed, strong, metallic cylinder E^1, about which, however, they are at liberty to turn as a centre of motion, so as to vary their angle of inclination at pleasure. The cutter-stock is grooved out at *e*, so as to fit the cylinder E^1, which thus serves as a stop to gauge and limit the motion of the cutter, and that equally for every degree of inclination of the ways G. The gauge can also be raised and lowered by means of the set-screws F F. The stock is raised and let fall by a screw-cam N, working upon an adjustable stud projecting from the stock. The stone is mounted upon a carriage fed along beneath the cutter, and is dressed down to a plane surface determined by the stop cylinder E^1. The stock is divided into two parts, I and K, which can be either keyed together so as to act like one, or left separate, so that I only will be lifted from its place and dropped, while K receives its blow.

Claim.—Making the cross-head E^1 of cylinder-form, and the tool-stock K with a corresponding concavity, substantially as shown; so that the ways or guides, which carry and give direction to the motion of the said tool-stock, turn freely on the said cross-head; and the said cross-head serves as a rest or stop at whatever angle the said ways or guides may be adjusted, and thus always determines the depth of the cut, and causes a perfectly true surface to be produced on the stone.

No. 10,637.—Albert Hock.—*Process for Gilding or Plating Fibrous Substances.*—Patented March 14, 1854.

This invention consists in coating silk, or other thread or yarn, tapes or bands, with gold, silver, or other metal leaf, by first coating a cylinder or roller with the metal-leaf intended to be used, and then winding thereon the silk or thread which is to be coated; after which, metal-leaf is to be laid on to the surfaces of the silk or thread which has been wound on the cylinder; when, by pressing the metal-leaf with dry cotton, the silk or thread will be coated with the metal-leaf.

The vapor of soap-suds is found to be sufficient to cause a slight adhesion of the metal to the rollers. The thread must be coated with a more adhesive preparation. No illustration.

No. 10,638.—J. B. Larwill & J. Cross.—*Improvement in Faucets for Measuring Liquids.*—Patented March 14, 1854.

This improvement, the drawing of which gives a longitudinal section, consists in so constructing faucets as to make them capable of measuring any given quantity, and shutting off the supply from the cask simultaneously with the discharge of the same from the faucet, and *vice versa* when it is desired to measure another quantity, and of speedily converting them into constant runners when this is necessary. A designates the faucet, made with a measuring chamber B of any

given dimensions; C is the handle; D, E, F are three passages communicating with the chamber B; the two former receiving the fluid, and the latter discharging it. The two hollow cylindrical valves G H, which control the entrance and discharge of the fluid, placed at each end of the faucet, are connected by the rod I that passes through its centre; the valve G serving to cut off the supply from the cask after the faucet has been filled, and at the same time opening the discharge passage.

Claim.—The manner of constructing faucets, whereby they are rendered capable of measuring any given quantity, and of shutting off the supply from the cask when it is desired to discharge the contents of the faucet, and of closing the discharge of the faucet when it is desired to measure a fresh quantity, and susceptible of being converted into a constant runner when desirable, substantially as herein described.

No. 10,639.—ELDRIDGE H. PENFIELD.—*Metallic Grummet for Sails.*—Patented March 14, 1854.

This invention consists in making the metallic grummet of three or more pieces of metal—A, figures 1, 2—raised to the proper shape, when the several parts are constructed and arranged as here shown, the line *g* indicating the sail-cloth to which the grummet is attached.

No. 10,640.—O. C. PHELPS.—*Improved Stop-Cock.*—Patented March 14, 1854.

In this cock the aim has been to adopt the conical plugs, and, at the same time, overcome the objection to which it is liable in cold weather, of having the plugs sunk too far into the socket; thus becoming jammed, requiring a blow to get them loose again, and sometimes even bursting the cock. The inventor thinks that he has overcome the difficulties and objections referred to by furnishing the cone at its base with a flange, which is made to bear upon a suitable ledge in the body of the cock, that prevents the plug from sinking too deeply in the socket; and also in constructing the conical plug in such manner that an air-cushion may be placed therein, for the purpose of neutralizing the effect of the water-hammer. A is that portion of the cock which is soldered to the water-pipe, and is secured to the body B by means of a screw at *a*. C is the eduction-pipe, to which the filter is attached by the screw *b*. D is the conical plug, having an opening at *c*, corresponding with the delivery-pipe C. There is a flange at D upon the conical plug, for which there is a corresponding recess in the body B. The springs at *f* may be formed of wire, or any other suitable substance. It is acted upon by screwing the piece A into its place. *g* is a plug or disk, of India rubber, that is forced into the plug D beyond the hole C, which confines a portion of air, *h*, beyond it, and counteracts the effects of the water-hammer.

Claim.—The flange *d*, in combination with the conical plug, constructed and operating as described, for the purpose set forth; and the air-cushion within the plug, constructed and arranged in the manner and for the purpose substantially as described.

No. 10,641.—Ezra Ripley.—*Improved Faucet.*—Patented March 14, 1854.

This improvement consists in the employment of adjustable clamps, or jaws, combined with a faucet-tube, for the purpose of opening and closing at pleasure the discharge orifice on one side of the tube. The figures give a perspective, and a transverse sectional view, taken through the clamps and discharge-orifice. A shows the situation of the tube; B B, the adjustable clamps; C, the screw by means of which the clamps are relaxed or tightened; D D, shoulders or guides for keeping the clamps in place while the faucet is being operated; E, the discharge-orifice; F, a packing of any suitable material for effectually stopping the discharge when desired.

Claim.—The adjustable clamps or jaws B B, in combination with the faucet-tube A, for the purpose of closing and opening the discharge-orifice E, when drawing fluids, constructed and operating substantially in the manner and for the purpose as described and shown.

No. 10,642.—Gerard Sickles.—*Improvement in Rotary Engines.*—Patented March 14, 1854.

This invention consists in making a tight fit between the cylinder and the revolving head which carries the pistons or slides, without packing, by making the revolving head with a flange on one side, which flange has its inner face fitting to a suitable surface within the cylinder, while that face of the main portion or hub of the head opposite the flange fits close to the bottom end of the cylinder, admitting steam to act on the sides of the revolving head thereby, and packing up the head to the cylinder.

Claim.—To the method of making and maintaining a perfectly tight fit between the ends of the cylinder and the revolving head, which carries the slides or pistons, by admitting a pressure of steam outside of the flange of the revolving head, substantially as herein set forth.

No. 10,643.—Nathaniel Smith and Asa Crandall.—*Improvement in Machines for Grinding Card-Teeth.*—Patented March 14, 1854.

An emery roller traverses back and forth from one end of the card cylinder to the other, and simultaneously therewith describes vertical circles, thereby operating in a parallel line with the carding cylinder upon the whole face of the card, and gradually and effectively grinding the teeth of the same to a perfect uniformity of length, and giving them the proper finish.

The claim is to a narrow emery card grinder A, carrying a weighted forked lever or shifter D, and keyed loosely on an endless or right-and-left screw B, which, in combination with the forked lever or shifter D, gives a continuous back and forward traverse to the grinder, and serves also as a shaft for it to hang or move upon while grinding the cards.

No. 10,644.—WELCOME SPRAGUE.—*Improvement in Seed-Planters.*—Patented March 14, 1854.

The improvement refers to planters in which the conveyance and deposite of seed in the earth is effected by the rolling of a wheel on the ground. It consists of a hub C, containing the seed in its chamber *c*, from which it is distributed as the wheel proceeds, through two opposite tubular radii E E, and forced out by a piston G in each cup, the piston being worked by cams *e*, in a chamber H of hub C.

Claim.—Combination of the hollow grain reservoir C with tubes E F, and piston G, operated by the cam grooves *e*, or equivalents, on the diaphragm H.

No. 10,645.—JAMES H. SWETT.—*Hanging the Griping Jaws of Spike Machines in Weighted Levers.*—Patented March 14, 1854.

The fulcrum of the griping jaw is at *c* (see fig.), and that of their levers at E. The levers are provided with weights F to prevent the griping jaw from yielding in the least, until it is prevented from making its usual vibration by the failure of the delivery apparatus to throw out the finished spike before the blank comes into the dies, which accident, with the great rapidity of the working of the machine, will happen occasionally.

The *claim* allowed in the case is, the hanging of the griping jaws B in weighted levers D, or their equivalents, so that when two spikes, or a spike and a blank, come in between the griping jaws at one time, the said jaw may rise and yield to the excess of metal between the dies, and prevent the breaking of any of the parts.

No. 10,646.—PHILANDER SHAW.—*Improvement in Rotary Cultivators.*—Patented March 14, 1854.

The invention is confined to the arrangement and operation of the teeth D in the rotating cylinder C, to be set in motion by steam or otherwise, by crank and belt, or chain I. The teeth are jointed, and have a certain range of motion confined by studs N, and stops *g* and *h*. As they come around on the periphery of the cylinder, they strike vertically into the ground by virtue of the points gravitating thereto, and at the same moment meet the stops, so that as the rotation of the cylinder C proceeds, they rake through and loosen the ground.

Claim.—The described method of hanging and operating the spades D D, they being applied in one or more vibrating sets to a rotary frame C, each spade being hinged to the frame and made to turn through the sector of a circle, and provided with stops *g h*, and a stud N, to act against a stationary cam O, as described; the whole being applied together, and to a carriage or frame A, and made to operate so as not only to dig into and raise earth, but to perform the office of impelling along on the ground the whole machine substantially as specified.

No. 10,647.—ABIJAH TAYLOR.—*Improvement in Steam-Engine Faucet Valves.*—Patented March 14, 1854.

Two cylinders, the pistons of which are connected together, have a rotating valve, common to both, for the ingress and egress of steam; the valve having a diagonal partition, which forms the ways, and being connected with the balance-wheel so that each shall rise when there is an excess of steam in the boiler and allow it to blow off.

The *claim* is to the rotating valve E, so constructed, adapted, and arranged, as to perform the functions of a regulating, safety, and pressure valve.

No. 10,648.—MANSEL BLAKE, assignor to BLAKE, MCALLISTER, and BLAKE.—*Improvement in Folding-Blinds.*—Patented March 14, 1854.

Claim.—The arrangement of a series of slats *f f* on one set, *a a*, of the parallel bars of a folding-frame of parallel and crossed bars *a a*, *b b*, so that the slats shall not only extend from end to end of their several bars, but be made to overlap one another, and thereby in connection with the folding-frame form a folding-blind or shutter.

No. 10,649.—WESTEL S. DANIELS.—*Improvement in Obstetrical Supporters.*—Patented March 14, 1854.

The invention consists in the use of a loop or ring D, like a martingale ring, in the harness part of the apparatus.

Claim.—Extending the thigh straps A across the top of the knees, and arranging them to run through rings D, or their equivalents, where they are connected with the knee and feet straps F and E, so that they may be seized by the hands of the user and drawn up to increase, or slackened to graduate, the pressure of the back pad B against the back, as desired, without changing the position of the body, legs, or feet, substantially as described.

No. 10,650.—LEWIS FAGIN.—*Smut Machine.*—Patented March 14, 1854.

The machine is constructed of a double vertical cone base, N, T, P, M, for the beating part, the upper apex expanding into a smaller cone H, but more elongated, and this opening into a cheese-formed blower, I C, on the same shaft A which carries the beater N P. The grain is fed at the top at F, and in descending the throat G, made adjustable by means of screw S, it is winnowed first through the action of the beating-fan P; falling then between the beaters N and K, it is kept rolling in a vertical position with such rapidity that each grain scours the other; which operation is repeated over and over by the action of the draught produced by the fans P and C, which carries the grain over the collar K, and guides K^1 K^2 back again between the beaters, until it passes between P M, to its final delivery. The dust, as soon as detached from the grain, is blown off through the openings in beater K L, the concentric throats, and the fan-case C.

Claims.—1st. The method of arranging a blowing apparatus, where the upper or suction fan C takes the air at the centre, and discharges on the periphery, to precede, on the same shaft A, a scouring mill for the purpose of taking from grain the smut, chaff, &c., before the scouring process is commenced, and afterwards thoroughly scour the same; thus constituting the cleansing and scouring process, the duty of a single machine, substantially as described.

2d. Cylinder D, hopper F, and feed-pipe G, or their equivalents.

3d. Collar K.

4th. Guides K^1 K^2, as arranged, and for the purposes described.

5th. The scouring cones N, O, K, L, M, severally and collectively, with their circular and horizontal grooves, and perforated terraces, or their equivalents, and in combination with the conical fan and beater P, substantially as described, and for the purposes enumerated.

No. 10,651.—ALPHEUS KIMBALL.—*Improvement in securing Window Sashes.*—Patented March 14, 1854.

The window strips are let into their places by means of the mortises *b b*, at the top and bottom; this, by itself, is disclaimed. They are secured in their places by the pressure of the thumb-screw, which at the same time furnishes the means for holding and tightening the sash.

Claim.—Confining window-sashes by means of strips, which are raised into deep mortises in the top of the frame a sufficient distance to enable them to be dropped into shallow mortises at the bottom of the frame, the strips being held against the sashes by the pressure of a screw, or other analogous device, in the manner described.

Also, the method of securing and tightening the sashes by means of pressure upon the exterior of the sash-strip, whether it be produced by a screw, in the manner described, or by any other analogous device.

No. 10,652.—DANIEL S. MIDDLEKAUF.—*Improvement in Grain Harvesters.*—Patented March 14, 1854.

The improvements refer—

1st. To the cutting device, which consists of a series of horizontal mutually-lapping cutting disks B B, the edges of which, passing by each other during their revolution, are to form a continuous cutting edge.

2d. To the device of delivering the grain from the platform, which consists of the combination of an oblique reel J with a horizontal reel G, in such manner that the arms *a* of reel G sustain the wings of reel J, and collect the cut grain as it falls against them, until projection N, on driving-wheel K, causing reel G to revolve, relieves reel J, and permits the gathered grain to drop from the platform by its own weight. The catch *b* interrupts the revolution, thus causing reels J and G to stop for the gathering of the successive sheaves.

Claims.—1st. The rotary cutters B B; and, second, the described combination of reels J and G, spring-catch *b*, and projection N.

No. 10,653.—Simon Pettes.—*Improvement in Machines for Drilling Stone.*—Patented March 14, 1854.

In this machine the drill-stock S is lifted by three wipers, M, on the shaft N, taking under a disk, I, attached to the drill-stock; the grooves on the under side of the disk, and into which the wipers work, being made slightly spiral in form, so as to rotate the drill. In these respects the machinery resembles some of those which have preceded it. The frame-work of the machinery slides freely on the ways A, and is sustained by a rope on the windlass D, passing over a pulley over the top of the ways, and attached to the frame of the machine below, which frame also carries the windlass. The descent of the machine is prevented by a pawl, G, taking into a rachet-wheel E, on the shaft of the windlass. As fast, however, as the drill cuts into the stone, the disk I, at the end of its blows, comes in contact with the pawl G, and releases the ratchet-wheel, and allows the machine to descend a little.

Claim.—So placing on the sliding frame *c c* the windlass D, with ratchet E, whose pawl is acted on by the drill-head I at each descent thereof, and thus feeds the entire mechanism as the work proceeds, substantially as set forth in the foregoing specifications. Fig. 2 represents a section of the machine, the drill-head being in an elevated position. Fig. 3 is a bottom view of the drill-head.

No. 10,654.—Jonathan Burrage.—*Process for Making Varnish.*—Patented March 14, 1854.

The invention and claim consist in the following process, viz: 200 pounds of crude turpentine, exposed to the air till it becomes hard, are mixed with 18 gallons of spirits of turpentine, and dissolved by heat. Having strained the solution, to each 100 gallons 6 pounds of sulphate of zinc are to be added; and after well mixing the mass, the whole is to be exposed to sunlight for from seven to ten days, until in the upper part of the vessel it becomes white, or a pale straw-color, when the varnish may be drawn off by a syphon.

No. 10,655.—J Graham Macfarlane.—*Improvement in Seed-Planters.* Patented March 14, 1854.

The improvement consists in oscillating seed-slide B B, by means of spring C, one way, and of cams I I and lever D the other way; and at the same time cleaning, by means of scraper J, participating in this movement, the V-shaped groove of wheel G. Scraper K prevents by its weight the transfer of more grain from the hopper into the seed-tube H.

The claim is restricted to the combination of the action of levers B D, cams I, springs C, and weight of scraper J, to clean the wheel G.

No. 10,656.—Victor Beaumont.—*Improved Machine for Distributing Types.*—Patented March 21, 1854.

On a horizontal table, figures 1 and 2, a disk J is made to revolve with an eccentric motion, shown by dotted lines W. A ring K supports the distributing channels between the parts S and T, made to receive the mixed type; and as the disk revolves, the openings suited to the size of the type, when presented to the distributors, are made to receive the type by the action of the springs *l* and slides I, &c.

No. 10,657.—Henry Green.—*Improvement in Grain and Grass Harvesters.*—Patented March 21, 1854.

Improvements and claims consist in—

1st. The V-shaped space or zigzag of the rear of the sickle teeth *o*, or the equivalent thereof, the angles of which press the substances back which collect upon the fingers *m m m*, and prevent them from clogging the sickle.

2d. Extending the rear ends of the sickle-teeth *o* back behind the sickle-bar *n*, whether made as represented in the drawing or broader, or extended back to a point; also sharpening said rear ends so as to cut off any stalks, grass, &c., which may collect upon the fingers *m* between the sickle and the stock B.

3d. Terminating the sickle-stock B at the inside of the rail A, and fastening them together, thereby permitting the sickle and stock to travel near the ground and parallel with it, while the rear of the carriage is carried so high as to clear the grass or grain cut at the previous swath.

No. 10,658.—Ralph Bulkley.—*Compounds for Extinguishing Fire.*—Patented March 21, 1854.

A mixture of sulphur, nitre, and vegetable matter, as saw-dust, tow, &c., is inserted into a tubular fixture *g*, which is placed in an aperture A, provided in the burning object. On applying a match at K, the dense smoke evolved by the ignition of the mixture is intended to absorb the oxygen, thus rendering the spreading of the fire impossible.

Claim.—The application to ships and buildings of a composition of fossil and vegetable substances which will transmute by the action of fire in close places, and produce a predominant smoke that will extinguish common fire, as herein described, using for that purpose the aforesaid compound, or any other substantially the same, and which will produce the intended effect.

No. 10,659.—Daniel Moore, assignor to G. S. Cameron.—*Improvement in Machines for Rubbing Type.*—Patented March 21, 1854.

The invention consists in the use of a supply-plate *n*, from which the type are thrown by centrifugal force through a gutter or trough 15,

into a conducting plate, that, by an elastic roller, supplies the type to a series of rotary fingers that carry the types first over a stone, or similar rough surface, that takes off any small burs or feather-edges, which, getting into the cutters, might cause the type to deviate from its course. Next, the type is carried through between a series of two or more cutters, that successively shave the sides of the type; and the type passes finally between brushes, which clean or remove from the type the fibres or shavings of metal which have been cut from the type, and leave it ready for use.

Claims—1st. The centrifugal supply-plate *h*, combined with the conducting-plate *o*, by means of the channel 15, to pass the type.

2d. The elastic roller *e*, moved by the pinion 24, and spur-wheel *q*, to separate the type.

3d. The stones *t* and *v*, or similar cutting surfaces, to operate first on the type.

4th. Two or more pairs of cutters, the lower ones being connected by the bridges 29, to remove the projections and rub the type.

5th. The brushes X and X^1, to clean the type prior to delivery from the machine.

6th. The means of changing the figures by a ring *s* and screw-nut for changing a whole set of the fingers 26, according to the thickness of the type to be rubbed.

No. 10,660.—F. C. GOFFIN, assignor to A. B. ELY.—*Improvement in Safe-Locks.*—Patented March 21, 1854.

The object of this invention is to construct the parts of the locks so that their relative positions cannot be ascertained from without.

The invention, as claimed, consists in an arrangement of sectors I I, part toothed—the interior ones—and part with plain surface, the outer ones, the last being of greater radius than the inner.

In the arrangement of two levers VI and V (one with a lip) called slot-holder and notch-holder, with the sectors; under which arrangement the toothed lever only engages in the slots of tooth-sectors.

In the arrangement of the levers (they being back of the sectors) and sectors in relation to the keyhole I, the expectation being that by this arrangement the levers cannot be reached with lock-picks.

No. 10,661.—OBADIAH MARLAND.—*Improvement in Iron Safes.*—Dated March 21, 1854.

This invention consists in making the interior of fire-proof safes more secure against the action of fire than heretofore, by dispensing with the use of metal in parts where its presence is not required, and substituting instead a combination-lining of soapstone, or other non-conducting material.

In the accompanying drawing, *i* is the back-board, connected with the lining of the door by means of wooden pins in the lining, which are inserted into corresponding holes in the back-board; *b* is the lining, made of soapstone or other non-conducting material.

Claim.—The combination of a lining of soapstone, or other suitable material, with the internal protecting plate on the inner surface of the door, where the said lining is constructed in the manner described, so as to dispense with any metallic connexion between the outer metallic casing and the internal surface of the door, whereby the heat of conduction passing from the outer to the inner surface of the safe is avoided.

No. 10,662.—R. P. BENTON.—*Spoke Machine.*—Patented March 21, 1854.

This machine dresses one side of the spoke at one operation; and by repeating the same the other side is dressed. The patentee only claims the combined devices and movements of the same to finish one half of the spoke at each operation.

The cutter-heads I J, upon a hollow shaft G, being driven by a band and drum L, are caused to advance towards each other by means of the vibrating lever *z*, which is suitably moved for that purpose, as the carriage M passes by the lever Y, which is actuated by the groove *c* in the carriage M.

The cutter-heads J I are connected to the shaft Q, working through the hollow shaft G, and slide to and from the spoke as the carriage passes, as before described. The claim is to the arrangement of the devices mentioned, to effect the result.

No. 10,663.—JEREMY W. BLISS.—*Improvement in Lifting-jacks.*—Patented March 21, 1854.

In the main stock of the jack slides a lifter *b*, filled with cells or perforations, into one of which is inserted a bolt or key *c* just beneath the axle-tree of the carriage. The slide is then raised by a pair of toothed cams A B, operated by a lever *a*. These toothed cams are provided with flattened surfaces *e e*, and a projection *s* at their extremities, which at the end of the lift afford bearings upon both sides of the centres of motion of the cams, affording a permanent support to the load in that position.

Claim.—The combination of the toothed cams A and B with the lifting-frame or slide *c*, arranged and operating together as and for the purposes set forth, when the said cams are so constructed at their finishing extremities *e* as to form a bearing surface on either side of the centres of the axis of the cams, whereby the jack is made self-setting, and is restrained from flying from its set, as specified.

No. 10,664.—CHARLES T. APPLETON.—*Improved Dyeing Process.*—Patented March 21, 1854.

The improvement consists in rotating the rollers a^1 a^2 *b b* of a dyeing vat A, alternately in opposite directions, by suitable gearings E p^1 g^1 m^2 m^3, calculated to carry the cloth wound round said rollers only a few feet in each direction several times in each minute, thus

enabling the dyer to withdraw the fabric from the liquor at the very moment the exact shade of color is obtained.

Claim.—Communicating to the goods, while in the vat, a reciprocating motion back and forth of at least double the distance from the upper rollers to the surface of the liquor, so as to insure the immersion of the whole material once for each vibration, by which means the whole of the fabric can be given any required number of dips, and the operation interrupted at the instant the desired shade is obtained.

No. 10,665.—A. C. CAREY and J. SMITH.—*Hydraulic Engine.*—Patented March 21, 1854.

Claim.—The peculiar arrangement of the valves C C^1, and piston-heads D D^1, as herein shown and described, viz: The piston-heads being movable, or hung upon centres, and opened and closed by means of rods F F, and acted upon by pins or studs G G at each end of the strokes of the piston, the valves C C^1 being opened and closed alternately by means of the pins L L^1 on the crank-shaft K, acting against the arms j j j^1 j^1; by which arrangement the water is permitted to act not only alternately upon the pistons, but also allowed to escape from the trunks or cylinders when the water has forced them along within the trunks or cylinders the required distance or length of stroke.

No. 10,666.—DEXTER H. CHAMBERLAIN.—*Improvement in Screw Wrench.*—Patented March 21, 1854.

The improvement consists in dividing into two parts longitudinally, or splitting, the bar of the wrench *a b;* the fixed jaw A, as is usual, being firmly attached to the end of the bar, and the movable jaw B held at the position desired by a conical screw-head E, fitting in between the bars or into the split.

No. 10,667.—THOMAS CARPENTER.—*Improvement in Concaves of Clover Hullers.*—Patented March 21, 1854.

The novelty consists in covering the concave I, of clover hullers, with card-teeth. The claim is restricted to the manner of threshing or cleaning the hull from the berry of clover-seed, by passing the seed between two cards, one being attached to the surface of a cylinder H, and the other to a concave surface I, so that the wires of the cards are in contact, the cylinder being revolved while the concave is stationary; the whole constructed substantially as described.

No. 10,668.—C. H. FONDÉ and T. B. LYONS.—*Improvement in Dredging Machines.*—Patented March 21, 1854.

The levers *r s*, or a cam attached to the small wheel, elevates the tipper S, so as to discharge the load, clear it from the buckets, and return it to its place.

The wheel with buckets across its periphery, and the means of revolving, of elevating, and depressing, are disclaimed.

Claim.—A tilting tipper applied to a dredging machine; said tipper dropping within the outer circumference of said wheel, so as to be in a position to receive the mud discharged from the buckets as herein set forth.

Also, the arrangement for causing the tipper to tilt out of the way, for the full bucket to pass and return again to its position to receive the mud discharged, and for keeping the tipper in gear with the wheel, so that it will always perform its duties notwithstanding the difference in their relative position when raising and lowering the wheel.

Further, the combination of the latch or dog L with the ledge of the bed-plate *m* of the bucket, by means of which the bucket is adjusted and held firm while digging and raising the earth.

No. 10,669.—J. L. GARLINGTON.—*Grain Thresher.*—Patented March 21, 1854.

The machine consists of a disk G, having two series of beaters E and *d*, corresponding to beaters D and C on the concave J, in which it revolves. Said disk runs on a horizontal axis H, with the capability to slip, one end of the axis resting against a spring I, yielding whenever too much resistance is found in the grain fed in at B.

Claim.—The employment of a vertical, revolving, adjustable, and springing disk G, made elastic by means of a spring I, bearing against the end of its shaft H, and adjustable by set-screws *b b*, which pass through the ends of the springs and throw it into action to a greater or less extent; and having a series of beaters E, set tangentially to it axis around its face, and another series *d d* placed radially round its periphery, in combination with a stationary concave J, having a series of stationary strippers D, arranged tangentially to the axis H of the revolving disk, on the inner face of one of its sides, directly under the passage B, where the grain is fed in; and another series of stationary strippers *c c* placed radially for a short distance round its inner periphery F; arranged as described, and for the purposes specified.

No. 10,670.—CHARLES W. HAWKES.—*Improved Nippers for Printing Presses.*—Patented March 21, 1854.

The object of this invention is to remove the sheet from the form after the impression has been given to it. In the operation the platen B is in its lowest position when the paper is laid on, as represented in the figure; then, as the power is applied to the crank L, the platen is made to swing up and carry the paper with it. Just before the platen gets to the form, it strikes the nippers *i* on the plate *a*, and carries them up with it to the form *o*, where the impression is given. One nipper, by the action of the spiral spring *e*, holds the margin of the paper to the platen, while the other grips it between the nipper and the grip-springs. In this position the paper is firmly held while the platen swings down, the force of the spiral springs *e* compelling the nippers to follow the

platen in its downward motion, until the paper is entirely free from the form. The nippers then stop, and the platen, leaving them, falls to its lowest position, again to receive another sheet.

No. 10,671.—PHILIP H. KELLS.—*Improvement in Harvesters.*—Patented March 21, 1854.

The principal feature of the invention consists in placing the cutters *m m* far forward on the frame, and sustaining them in their relative positions in travelling over uneven ground, by means of a small pivoted guiding castor-wheel E, forward of the driving-wheel, and on the gearing end of the cutter-bar H.

Claim.—Laying the cutter-bar *n*, which carries the cutting-teeth *m m*, ranging with the guide-roller E, and perpendicular to its side face, when the axis of said roller is parallel to the axis of the driving-wheel, for causing the cutter-bar to conform to the surface of the ground passed over, and for the prevention of accidents to the cutting-teeth, as herein fully set forth, said bar being on the gearing side of the machine.

No. 10,672.—JORDAN L. MOTT.—*Improvement in Railroad-car Wheels.* Patented March 21, 1854.

The patentee does not claim wheels with two plates, connecting-hub, and rim, nor merely wheels with two hubs.

Claim.—Making railroad-car wheels with the outer face of any of the usual forms, in combination with the inner plate, of a conical or nearly conical form, connected with the axle towards the middle of its length, to brace the rim of the wheel to resist lateral thrusts, and greatly reducing the liability, if not entirely avoiding the breaking or bending of the axle.

No. 10,673.—AMBROSE NICHOLSON.—*Shutter-fastening Hinge.*—Patented March 21, 1854.

The invention consists in the excentric extension a^1 and recess E of the plate A, in combination with the pin c^1 of the plate C, by which, in connexion with the elongated eye b^1 and cylindrical pin d^1, the operator is enabled to move the shutter, and catch it or release it, without giving it any upward or downward motion.

No. 10,674.—J. G. SHANDS.—*Improvement in Machines for Dressing Mill-stones.*—Patented March 21, 1854.

The wiper-wheel H, which operates the cutter-stock D, is hung in a tilting-frame and lever E, and has motion communicated to it by the toothed wheels I and J, the axis of the latter of which is the centre of motion of the tilting-frame. The raising and lowering of the wiper-wheel H, by means of the lever E, held by the pawl R and ratchet S, is a ready way of graduating the force of the blow given by the cutter.

Claim.—Placing the wiper-wheel H, which operates the arbor D and pick D^1, on swinging frame E, as herein shown and described, by which a greater or less length of vibration may be given to the arbor D, and the pick be made to act with a corresponding degree of force upon the stone.

No. 10,675.—C. V. AMENT.—*Hen's Nest.*—Patented March 21, 1854.

The device consists in placing underneath a nest, B, of ordinary form, a cushioned chamber F, the lower portion of the upper part having an opening *b*, to discharge the eggs through valves E E, which close as soon as the egg has passed.

Claim.—Constructing a hen's nest with two peculiarly arranged chambers A F, which communicate with each other through a hole *b*, in the centre of the nest, and self-adjusting false bottom E under the same, the upper chamber B being provided with a suitable nest, and a number of false eggs for the hen to sit upon, and the lower one, F, provided with a soft cushioned surface for the eggs to fall upon, which is made of such shape that the real eggs, as they escape through the false bottom, are caused to roll gradually towards the edge of the bottom, and remain there until removed, the whole being arranged in the manner and for the purposes herein set forth.

No. 10,676.—DAVID A. MORRIS.—*Improvement in Anti-friction Boxes.* Patented March 21, 1854.

Friction-rollers made to revolve simultaneously by means of an endless chain passing over teeth on each roller.

The use of spur-gear teeth for this purpose is disclaimed, as covered by the patent of J. Harris, jr., February 22, 1848.

Claim.—Furnishing the series of friction-rollers at one or both ends, or at any part of their length, with a series of toothed-wheels D, one for each, and an endless chain *d*.

No. 10,677.—CHARLES T. APPLETON.—*Dyeing Apparatus.*—Patented March 21, 1854.

The invention consists in forcing the dyeing liquid through the holes *a* of a hollow perforated cylinder H, passing at the same time the goods to be dyed over the surface of said cylinder, thus causing fine streams of dyeing liquid to force out the globules of air contained in the pores of the cloth, and taking their place to dye the cloth.

The liquid may be forced into the cylinder by a force-pump P, or by its own weight, being placed in an elevated trough D. The goods are passed lightly over cylinders H, by means of additional rollers, M, O, L.

Claim.—The combination of the perforated cylinder H, constructed as described, with the force-pump P, or its equivalent, operating substantially as set forth.

No. 10,678.—D. A. CAMERON.—*Method of adjusting the Tension on Belt-Saws.*—Patented March 21, 1854.

This is merely hanging the upper carrying pulley D in the block W, which is free to slide up and down, and is so connected with the lever L, that by weighting L more or less, the saw is more or less tightened or relaxed. A sliding collar on drum D, provided with adjusting screws, serves to bring the saw forward, and to make it project beyond the edge of the drum.

The circumference of the drum is provided with conical pins to catch into holes in the belt-saw.

No. 10,679.—THOMAS DAUGHERTY.—*Improvement in Shoe-Lasts.*—Patented March 21, 1854.

This last consists of a hollow metallic body furnished with a wooden sole E, screwed to its bottom, the wood being so cut as to present the end of the grain to the pegging awl. The shank of the last is armed with lead or other soft metal J, to prevent the dulling of the shoe-knife against the harder metal.

Claim.—The mere construction of a last of wood and metal is not claimed; but the construction of a last consisting of a metallic shell or casing enclosing wood placed end-wise upon the sole, and having soft metal pieces J J upon the sides of the last, for the purposes set forth.

No. 10,680.—G. W. LIVERMORE.—*Barrel Machinery.*—Patented March 21, 1854.

The blank strips are passed through a double series of rollers B D, and C; one set being toothed or serrated, the other set concave pressure-rollers. This forms and finishes the two surfaces of the stave. It is then clamped, or any number of them, to a carriage I, to be jointed and cut to proper lengths. As this part of the machine is a "Daniel's planer," except the saw N, which cuts them to a length, no further description is necessary.

The *claim* covers the mode of dressing the two surfaces of the stave, and the peculiar construction of the carriage I, in combination with its well known parts.

No. 10,681.—SAMUEL MCKENNA.—*Portable Punch for Railway Bars.* Patented March 21, 1854.

This is an improved hand-punch for punching the notches required in the flanges of rails near their extremities to secure them to the rail-road chairs.

Claim.—The arrangement of the tongue A, connected jaws C C, stirrups S, punches O O, dies, levers, and excentric B.

No. 10,682.—DAVID and HERMAN WOLF.—*Improvement in Seed Planters.*—Patented March 21, 1854.

The improvement consists in the construction of the under surface of seed distributing disks, which were usually made plain all over heretofore, furrowed obliquely in the part near the border, and having the seed apertures in every other furrow as represented in the drawing, and intended to conduct off all dirt, chaff, crushed grain &c., which otherwise would lodge between said disks and the stationary part of the hopper.

The claim is restricted to the combination of annular revolving perforated plates *e*, with curved grooves on the under side thereof, substantially in the manner and for the purposes described.

No. 10,683.—ALEXANDER WILBUR.—*Improvement in Machines for Jointing Staves.*—Patented March 21, 1854.

The operation of this machine is thus—

The stave to be jointed is placed under and against the lip *e* and shoulder *d*, and the operator, by his hand, presses the swinging-frame F, and stave in it, towards the jointing-wheel B. As the edge is cut away, and the swinging-frame continues to descend, the rod *f*, in the inclined staples *g*, draws back the swinging-frame; the slot *c* admitting the axis *a*, of the said frame, to move back in the plane of the wheel, thus constantly changing the point of action on the concave, so that whether the stave be wide or narrow, it has its requisite bilge without any loss of material.

Claim.—So hanging the swinging-frame F, which feeds up the stave to the jointing-wheel B, that staves of variable widths may be dressed with the bilge necessary for such widths.

Also, in combination with the swinging frame F, the guides *j j*, which move with it for the purpose of firmly holding the stave to the jointing-wheel or cutters, substantially as described.

The engraving presents a side elevation of the machine.

No. 10,684.—ALEXANDER WILBUR.—*Improvement in Crozing Machines.* Patented March, 1854.

The barrel, after being set up, is firmly clamped in the rings F F^1; the levers N are then drawn towards each other, which drives up the cutter-wheels into the ends of the barrel. By its rapid rotation, each dresses one of the ends, and does the chamfering. The levers L are now drawn towards each other, which throws out the crozing tools *b b*, which finishes the dressing. The levers are then turned back, and the base B^1 run back, when the barrel is released and the machine is ready to receive another barrel. The rotation of the cutter-wheels is constant, and does not interfere with the removal or replacing of the barrel, and much time is consequently saved.

Claim.—So combining the crozing tool with the cutter-head as that said crozing tool may be thrown into or out of operation, whilst the cutter-head continues its rotation by means of the centre pin, or its equivalent, substantially as described.

No. 10,685.—HEMAN GARDINER—*Improvement in Quartz Crushers.*—Patented March 21, 1854. Patented in England July 5, 1853.

The ends of the fork E, which hold the axis of the crushing ball, move on the reversed and inclined guides I^1 I^2.

Claim.—The crusher-trough B, having on each side-rail reversed inclined planes I^1 I^2, for the purpose of giving the ball, as it is propelled backwards and forwards in the trough, a twisting motion.

No. 10,686.—JEREMIAH W. BROWN, assignor to SAMUEL M. FOLSOM.—*Rotary Smoothing-Iron*—Patented March 21, 1854.

This is a hollow smoothing-iron, having two smooth faces, A and C, and hangs in its handles or journals so that it can be turned over and either face brought downwards at pleasure; and while the ironing is being done with the under face, the reheating of the upper face may be going on by the flame of a lamp within, as shown in the drawing.

Claim.—The revolving smoothing-iron, heated by means of a spirit or gas lamp internally, or its equivalents, in the manner and for the purpose substantially as herein set forth and described, the whole forming a combination for the purpose of economy in time and a saving of labor.

No. 10,687.—E. VALENTINE and A. BRADWAY.—*Stone Jointer.*—Patented March 28, 1854.

An endless belt passing round cylinders E, having on it a stop or catch *m*, forces the stone along a bed, on each side of which are fixed knives *d*, which joint the two edges.

The circular saws *i*, *l*, *e*, *f*, remove the superfluous material. The stone is kept to the knives by springs *c*, which also so press it as to cause its taper to be given as it passes through the pathway of the cutters.

The claim covers this arrangement of devices.

No. 10,688.—ELBRIDGE WEBBER.—*Improvement in Ship Blocks.*—Patented March 28, 1854.

The improvement consists in making the shell *b c* of cast or wrought metal, and fitting therein the wooden cheeks *a a* and the shelves *f*, as one case fits into another.

No. 10,689.—ELLSWORTH D. S. GOODYEAR, assignor to THE NEW YORK RUBBER COMPANY.—*Improvement in Processes for Treating India Rubber.*—Patented March 28, 1854.

The improvement refers to the manufacture of hollow articles from India rubber, and consists in filling such ware, as balls, &c., to a certain extent, with water, which being, during the process of vulcanization, converted into steam, exercises the necessary inside pressure to impart any desired pattern to the exterior face of the article.

Claim.—The introduction of water or any other liquid into the interior of articles which require expansive force for their perfect formation against the interior surface of moulds, said liquid to be converted into steam, substantially as, and for the purposes, specified. No illustration.

No. 10,690.—ROBERT H. HARRISON, assignor to R. H. HARRISON and JOHN S. GALLAHER.—*Improvement in Churns.*—Patented March 28, 1854.

This churn consists of a hollow metallic winged dasher E, revolving on a vertical axis, and which can be filled with water for regulating the temperature of the cream. Two stops *h h* are fixed to the interior of the churn-tub.

Claims.—1st. The construction of a churn-vessel with hollow or solid, double concave, adjustable, detachable side-gatherers *h h h h*, specifically as shown in the drawing.

2d. The construction of a churn reservoir dasher E, having curved or deflective radial chambers, of a concavo-convex form, *k k k k*, with direct radial wings or flanges *g g g g*, and the using the same combined with the double-concave gatherers *h h h h*.

3d. The double application of warm and cold water, or ice, in combination with the dasher E, and the double-concave gatherers *h h h h*, substantially as set forth.

The application of hot or cold water solely, in the process of butter-making, is not claimed, as the same have been employed separately or distinctly heretofore, as is well known.

No. 10,691.—A. J. COOK.—*Improvement in the Discharging Apparatus of Harvesters.*—Patented March 28, 1854.

The device consists in carrying the cut grain, by means of apron *i*, upon table *z*, and delivering it therefrom in parcels sufficient to form a sheaf upon the ground by means of a shovel *y*, set on arm *x*, which is fixed upon bar *w*, vibrated one way by arm *v*, and the other way by weight z^1.

Claim.—The combination of table *z* with arm *v*, at the end of reel *p* and apron *i*, for the purpose set forth.

No. 10,692.—H. G. ELLSWORTH.—*Improvement in Belt-clasps for Machinery.*—Patented March 28, 1854.

Claim.—The patentee does not limit himself to the special modes of construction of the plates described, as these may be varied within the range of his invention; but claims, as his invention, the method of uniting or splicing belts end to end by means of metal plates riveted or otherwise secured to the outer surface of and near the ends of the belt, and clasping or interlocking, in manner substantially described, and for the purposes specified.

No. 10,693.—Benjamin G. Fitzhugh.—*Grain-Harvester.*—Patented March 28, 1854.

The invention consists—

1st. In providing the fingers *h* of the cutting apparatus with a blade *y*, which being fastened on one side by a point fitting into the angle h^1 of the finger *h*, and on the other side by a screw, can readily be removed for sharpening or any other purpose.

2d. In the curved form of the cutting apparatus *h*, *g*, *y*, which not only affords a draw cut for the sickle *g*, but contributes to the efficacy of the further devices, viz:

3d. The curved beaters of reel *p*; and

4th. Revolving sweep-rake *i*, i^2.

Said devices are intended to have the grain laid on the platform *i*, with the stalks converging towards the axis i^2 of the rake, which latter, by its revolution, collects them and leaves them on the ground as a sheaf in the most favorable condition for binding.

Claims.—1st. The removable blade *y*, in the fingers *h*, arranged and secured in place in the manner and for the purposes set forth.

2d. Combination of a curved reciprocating knife *g*, with a curved row of fingers *h*, and a curved platform *c*, as described.

3d. Constructing the reel *p* with curved beaters, in the manner and for the purposes set forth.

4th. The combination of a continuously revolving sweep-rake $i\ i^2$ with a revolving reel *p*, which disposes the grain upon the platform, substantially as set forth.

No. 10,694.—Luther B. Fisher.—*Seed-Planter.*—Patented March 28, 1854.

This is a seed-planter in the form of a triangular harrow on three wheels, F D D, with seed reservoirs cut in the side timbers, and a continuous seed-valve plate $y\ y^1$ running through the whole of each timber, the latter being provided with seed apertures *m m*, and reciprocated by rods *i i*, set in motion by hook *h* of the plate *f*, a recess of which plays into the cam G of wheel F. The front wheel F is connected to the main frame of the machine by bridle C and pin *d*, set loosely in its lower part; which contrivance permits its being drawn back or forth by the action of lever Q and bar *p*, for the purpose of lifting the point of connection, and thus lifting the drill-tubes F whenever desirable. The said pin *d* and bridle C serve also the purpose of interrupting the action of cam G upon rods *i*, and, consequently, upon the seed-valve plates $y\ y^1$ during the time of turning the machine, by the simple fact of the position of bridle or beam C at right-angles to the hook *h* during this time.

Claims.—Are restricted to—

1st. The combination of the rod *p*, lever Q, clevis C, and pin *d*, when the latter is movable in a longitudinal slot for raising the teeth T from the ground, as herein fully set forth; and,

2d. The attachment of the rods $i\ i^1$ operating the slides $y\ y^1$ to the

hook *h*, as described, so that the slides will remain at rest during the turning of the implements, as herein fully set forth.

No. 10,695.—BENIAH FITTS.—*Steam-boiler Feeder.*—Patented March 28, 1854.

This improvement consists in the arrangement of a water reservoir E, two steam and water chambers A N, with chains around them, a faucet cock or valve H, which is opened and shut alternately by the expansion and contraction of the chains, as steam is admitted into one of the chambers, and cold water into the other, and *vice versa*.

No. 10,696.—RICHARD JONES.—*Improvement in making Zinc White.*—Patented March 28, 1854.

The point of novelty consists in forcing a blast out of the retort-exit C, and in the zig-zag constructed condensing tubes F F.

Claims.—1st. The method of cooling, conveying, and oxydizing the vapor of zinc by means of a jet of air introduced into a closed retort A, substantially as described in the specification.

2d. Constructing the conduit pipes F F, so that every portion of them shall be inclined in such manner as to prevent the accumulation of matter to clog them, and to direct the current of vapor downwards on entering the condensing chambers E E; the conduits thus constructed and operated being arranged over the collecting or condensing chambers, substantially as described.

No. 10,697.—SEYMOUR KETCHUM.—*Smut-Machine.*—Patented March 28, 1854.

This machine consists of a terraced cam *i*, vertical cylinder B, with the concave A, constructed of loose staves *m m*, capable of adjustment, so as to increase or diminish the openings *o* at will of the operator. The staves have on their inner face longitudinal steps *s* s^1, inclining outwards, backwardly in relation to the travel of the runner B, whereby the openings *o* may be larger than the wheat, and still retain the latter.

Claim.—The concave A, constructed, as described, of loose staves *m m*, so fitted to or connected with the heads *n n* of the concave, as to be capable of circular adjustment with facility and despatch, substantially as specified, for the purpose of varying the number and widths of the escape openings between the staves, the said staves being formed on their inner face with a longitudinal step or steps *s* s^1, as described, whereby the width of the openings between the staves may be made larger, so as to form a ready escape for the smut and dust, and other extraneous matter, without letting out the grains of wheat there through, and whereby the clogging of the escape openings by damp smut is avoided, essentially as herein set forth.

No. 10,968.—C. P. Bailey.—*Portable Head-rests for Chairs.*—Patented March 28, 1854.

This head-rest consists of a light lath *a*, having at its upper extremity a pair of jointed arms *b b*, that carry a strap *d*, to support the head; and at the lower extremity another pair of arms *e e*, with a strap *f*, arranged to act upon the back of the sitter, as shown in the drawings.

Claim.—The apparatus above described, consisting of a back plate with arms for supporting the band or cushion upon which the head rests, the whole being sustained by the hips, which hold it in place, at all times disconnected with the back of the seat, but resting against or upon it, so as to be at once taken away without injury to the seat, and folded up in a portable form—the whole being constructed and arranged substantially in the manner and for the purpose described.

No. 10,699.—Anson Balding.—*Improvement in Sub-marine Scoops.*—Patented March 28, 1854.

An ordinary scoop is attached to the sled B B. The drawing represents it in condition for excavating; when full, and required to be drawn over the bottom, the cord is pulled, which causes the levers E E to open the springs C, and release the catches *d*, when the scoop falls upon its bottom.

Claim.—The combination of the scoop and sled as described, for the purposes set forth.

No. 10,700.—Thomas W. Chatfield.—*Hot-air Furnaces.*—Patented March 28, 1854.

This invention consists of a furnace surrounded by an outer and inner wall. The ash-pit of the furnace is surrounded by a frustrum of a cone E, with which are connected rectangular passages D D, for the admission of cold air to be heated. The air passes up through the annular passage between the frustrum E and ash-pit, thence through apertures made in a series of radiators F G, above the fire-pot. These radiators F G are divided in their interior by plates with apertures for the passage of hot air and the products of combustion. The hot air is conveyed to the apartments to be heated in the usual manner.

No. 10,701.—Joseph Marks, assignor to William Whiting.—*Improvement in Machinery for operating Car-Brakes.*—Patented March 28, 1854. Patented in England November 23, 1852.

The object of this improvement is to give the engineer the control of all the brakes of a train, so that he may operate them either simultaneously or separately, and with speedy effect, the rubber blocks being closed by the action of springs.

The patentee does not claim any mode of forcing the brakes of one or more cars against their respective wheels by any mechanism brought into action by a power generated on an axle of the engine.

Owing to the space requisite for an intelligible exposition of the details of this somewhat complicated mechanism, only the claims can here be given.

Claims.—1st. The adjustable clip or clips *x*, in combination with the pawl-lever or levers, and the draught-rope *v v* thereof, and as applied and made to operate, substantially in the manner as specified.

2d. In combination with the cord extending from the locomotive to the brake-shaft *d d*, and the pulley *h*, the travelling nut *q*, screw *r*, stud *t*, and pins *s s*, in the manner and for the purpose substantially as specified.

3d. The combination of the lines and the mechanism for operating the same, as described, whereby the several brake-springs of a train of cars may be wound up simultaneously, or one or more of them at a time, as required, in combination with the line and the mechanism for operating the same, so that by adjustment of the spring clips the several brakes of the train may be either simultaneously, or one or more at a time, put in action to retard or arrest the motion of the cars.

4th. Finally, and generally, the combination of main-springs for pressing the brakes against the wheels, mechanism for winding up the springs so as to remove the pressure from the brakes, and to hold the springs in a state of tension ready to apply pressure on the brakes instantly on being released, and mechanism to release the springs and allow them to act, (both the mechanism for winding up, and that for releasing the springs, being so constructed and arranged that it can be operated on either the locomotive or on the separate cars,) and also capable of such adjustment that the brakes of all the cars can be either simultaneously or one or more at a time, and in any required order of succession, put in action. No illustration.

No. 10,702.—JOSEPH MARKS and JOHN HOWARTH, assignors to WILLIAM WHITING.—*Improvement in Machinery for operating Car-Brakes.*—Patented March 28, 1854.

A detailed description of this improvement would require much more space than can conveniently be allowed, and accordingly only the claims are presented.

Claims.—The improvement of so adjusting the relative lengths of the relieving branch lines of a train of two or more cars, by means of adjustable pulleys, and connecting these lines by a single main line, that all the relieving mechanisms of such train may be put in operation in such manner that the brakes of the several cars of the train may be either simultaneously or in succession thrown out of action on the wheels, or relieved of the pressure induced by the main-spring or springs, as hereinbefore specified. Heretofore, the main-spring coil, bar, or plate, has been constructed of metal, which, being necessarily of a high temper, in order to give it sufficient strength and prevent it from setting, is liable to break from a variety of causes—among others, sudden changes of temperature; and, when broken, the apparatus is entirely disabled, and the lives of those depending upon its efficiency thereby endangered. To such a spring as this no claim is made, neither

to a spring simply composed of two or more bars or plates of metal; but the combination and arrangement of a series of independent springs with the mechanism for applying the force produced by their tension to press the brake-rubbers upon the wheels; this mechanism being put in action either from the locomotive or from the separate cars by the engineer or other person having it in charge, or automatically, and with certainty and promptness to detached cars whenever one or more of them become detached from the train, either by design or accident, in such manner that each spring will act with its whole force independently of all the rest, so that, in case one or any number less than the whole of the springs shall break, the mechanism will not be thereby disabled, but merely rendered less efficient; and as even the minimum degree of efficiency thus left may be sufficient to prevent an accident to the one on which the apparatus is placed, and would in any case lessen the damage, if it did not prevent the accident, the safety of railway travelling is thereby increased.

Also, in combination with the main-spring shaft and the frame, the apparatus by which the power of the main-spring is prevented from acting too suddenly, or so as to rupture or injure the brake-chain, when the slack of it is taken up as stated; meaning also to claim the combination of parts or elements constituting such apparatus, the same consisting of the wheel f^1, the rubber g^1, the lever h^1, spring k^1, catch-lever l^1, slide n^2, with its stud p^1 o^1, spring q, and the tripping cam s^1, as hereinbefore specified.

Also, the mechanism for disengaging the retaining pawl of the ratchet—that is to say, the tubular-shaft or sleeve n, and its oblique end q, acting as a stop in combination with the windlass-shaft o, and its oblique end p, to act in connexion with the oblique end of the sleeve, so that, in case the shaft o should be turned back by the movement of the spring with too much force, its screw may not bind in the screw of the sleeve, and thus prevent the apparatus from working.

Also, the improvement of so combining the windlass-shaft c^1 with the fusees or apparatus by which it is put in rotation, that it may be disengaged therefrom in order to relieve the car-wheels from the pressure of the brakes without rendering it necessary to do so by rewinding the springs.

Also, the combination of the key or feather k^2 and the locking-arms s^1, or their equivalents, with the shafts n and z^1, the same being for the purpose hereinbefore specified.

Also, the improvement by which each windlass or pulley-shaft o or z^1, and its main line y or z^1, is connected, viz: by a branch line y or a^1, loose pulley, and friction-screw, or contrivance, as combined together, and with the main line and windlass-shafts, and made to operate in manner substantially as specified. No illustration.

No. 10,703.—John Absterdam and W. B. Merrill, assignors to J. A. Woodbury and W. B. Merrill.—*Fixed Device for Tonguing, Grooving, and Tapering Boards.*—Patented March 28, 1854.

This invention consists in arranging devices to cause the rotary cutters *k k* to advance or recede so as to operate upon a tapering board.

The conical pulley *o*, driver *q*, and shaft *r*, which gears, by a bevel wheel, with a vertical shaft carrying a cog-wheel *v*, which gears and feeds by rack *w* the carriage *x*, carrying the oblique bar *z*, in the under side of which there is a groove *y*; an arm d^1, fast to the sliding cutter-head K, has a pin which fits in said groove.

The machine being put in motion, the cog-wheel *v* moves the rack *w*, and causes the oblique bar *z*, by means of its groove *y* and the pin on the arm d^1, to advance or withdraw the cutter-head according to taper of plank. It must be remarked that the bar *z* is adjustable, and its degree of obliquity is determined by the taper of plank. The screw e^1 sets this.

No. 10,704.—Richard D. Mott.—*Improvement in Stereotype Pans.*—Patented March 28, 1854.

The peculiarity of this improvement on stereotype pans consists in the substitution and use of the casting plate C, with its adjustable bevelled attachments D, D, D, having chisel-like cutting edges 1, 1, 1, 1, on their ends, for cutting and trimming the single-faced plaster moulds as they are forced between them, one plate only being used, but having both its sides fitted with the cutting-edged attachments, and the platen held down near the middle height of the pan in a horizontal position during the process of casting, thus securing a full and perfect face, and an even and regular back, to each stereotype plate; and whereby, also, greater facility is afforded both in casting and removing the stereotypes after the cast becomes cool.

No. 10,705.—N. G. Norcross.—*Method of Regulating Feed-motion to a gang of Saws.*—Patented March 28, 1854.

A drawing is unnecessary in this case. The claim is merely to a method of regulating the feed-motion for sawing-machines, and consists in placing a disk on the end of the shaft carrying the feeding cog-wheel, in such a position that another disk, adjustable on a shaft passing near the former disk, may be made to roll on the face of the former disk, at a greater or less distance from its periphery. This, of course, imparts to the shaft on which is the feeding disk any required differential velocity.

No. 10,706.—David B. Rogers.—*Machine for forming Cultivators' Teeth.*—Patented March 28, 1854.

One fixed die A, and one movable die D, a cutter E, passing through the upper part of the movable die. When the body of the tooth has been swaged and is held between the dies, the cutter is moved forward, and cuts off and gives form to the cutting edge of the tooth. The claim allowed is to the arrangement of the cutter and dies, whereby the cutting edge of the tooth is cut and formed by the cutter while the tooth is held between the dies.

No. 10,707.—WILLIAM H. SEYMOUR.—*Improvement in Harvesters.*—Patented March 28, 1854.

The improvement is confined to the devices for working the rake *c* on a segmental platform C, to accomplish the same purpose as that accomplished in a former patent by the same party, of July 8, 1851, without exposing the gearing to be clogged or obstructed by the entanglement of the grain crowding into it; and to the attachment of rake *e* to arm I, by means of screw *r* and joint *q p*, admitting of a secure fastening thereof at any desired elevation from the platform *b*.

Claims.—1st. The combination of the shaft E^1 for rotating the pinion F, the shaft I for turning and carrying the rake *e*, and connecting mechanism, constructed and arranged as described, whereby the rake is turned up and down and firmly held in either position in a simple and convenient manner, without producing an undue strain upon any part of the driving-gear.

2d. The adjustment of the rake at varying heights from the platform in its elevated and depressed pos tion, by means of the device herein described, or the equivalent thereo ; t e driving-gear being transferred from the outer rim of platform C to the outside of the inner rim thereof at B.

No. 10,708.—JOSEPH SMART.—*Pumps.*—Patented March 28, 1854.

The inner and outer cylinders B A are closed at the bottom; the induction pipe C connects with these cylinders through the pipe G to the inner, and through F to the outer. The inner cylinder being open at its top, the piston being put in motion, it thus operates:

On the upward stroke the water enters, by valve 1, the inner chamber through G; and is forced, on the downward stroke, valve 1 closing up, through valve 2, into discharging pipe H. On the descent of piston a partial vacuum is formed in both the outer and inner cylinder; and, as these connect through pipe F with induction pipe C, the water will flow into the outer chamber A, and on re-ascent of piston it will be forced back through F, up through valve 4, into discharge pipe H. The claim is to the mode of arranging the outer and inner cylinders, in connection with the valves, to effect this result.

No. 10,709.—H. C. SMITH.—*Shingle Machine.*—Patented March 28, 1854.

The block is placed on shelf *x y*, and the frame K L caused to ascend; the knife *w* rives a shingle from the block during this ascent, and it drops, by its weight, into a proper receptacle, W, below. On the descent of the frame K L this shingle is driven between two knives *a b*, which are caused to gradually approach each other, giving the taper by springs *n m*, by means of a wedge attached to the descending frame.

No. 10,710.—T. G. STAGG.—*Machine for Tenoning and Wiring Blind-Slats.*—Patented March 28, 1854.

This machine tenons and wires blind-slats thus: The slat *p* being placed on rest G, the lever M being moved, causes the clamp H to seize and hold it, and at the same time causes the pricker L to pierce it for the eye. This movement of lever M also causes the two rotary cutters to advance, and, being in motion, cut the tenons. The cam J actuates all these at the same time, drawing the rotary cutters by rods *j j*, and operating the clamp H and pricker L, by impinging against two levers extending down from them. By moving lever M in the opposite direction, the slat is released and the machine relaxed, ready to receive another slat.

Claim.—The arrangement of the devices mentioned to effect the tenoning and pricking.

No. 10,711.—JONATHAN G. TROTTER.—*Furnace for Zinc-White.*—Patented March 28, 1854.

The furnace has three chambers—an upper, K, middle, H, and lower, L. The fire built at one end, B, delivers the lighter vapor into the upper, and the heavier into the middle chamber; the latter of which passes out at the chimney J, while the former, after traversing the length of the furnace, descends in two passages h^3 to the lower chamber, where, after having traversed twice the entire length, it enters the discharge-chimney M.

Claims.—1st. The combination and use of the upper and lower discharge or passage ways h^2 and g^2, from the fire-place B to the furnace H K—that is, the upper passage way g^2 for discharging or carrying off the lighter gases from the fire-place by the reverberatory flue K and the return flues L to the chimney M, and the lower passage-ways $h^2 h^2$ for discharging the flame from the fire-place direct upon the mass of ore on the bed H of the furnace, and thereby reducing or subliming it more effectually and with less consumption of fuel than ever before accomplished.

2d. The combination of the alternating series of bridges or brakes N N in the return flues L L^2, with the reverberatory flue K and double-arched conformation of the roof of the furnace, and the upper passage-way g^2 and the lower passage ways h^2 h^2 from the furnace, for the purpose of working zinc ores for making white oxide of zinc, substantially as herein set forth.

No. 10,712.—GEORGE TROTT.—*Oil Cup for Steam-Engine.*—Patented March 28, 1854.

The cup A has an upper opening to the atmosphere, and a lower one to the steam-chest or cylinder, &c. Both openings are guarded by valves on the same stem C, a coiled spring *m* being around the stem, which keeps the upper valve in contact with the upper opening, except when it is forced down by the act of filling the cup. The lower opening

is always open, except when the upper one is as above; and when the upper one is open, the lower one is closed.

Claim.—The arrangement of a double valve *a b* and the passages for feeding and discharging (*d*) the oil, in the manner and for the purpose described.

No. 10,713.—William Webster.—*Machine for Bending Sheet-Metal.*—Patented March 28, 1854.

The improvement consists in the arrangement of a non-axle cylinder B in relation to the usual rollers C D, and mandril E, of sheet or tin tubing, or sheet-metal bending machines; the advantages of this arrangement being, that metal may be bent upon the exterior or interior of a non-axle cylinder.

No. 10,714.—R. A. Wilder.—*Improvement in Railroad-car Wheels.*—Patented March 28, 1854.

Claim.—The groove in the wheel near the flange, and, in combination therewith, the convex form of the tread.

No. 10,715.—Edward H. Ashcroft.—*Improvement in Track Cleaners for Railroads.*—Patented March 28, 1854.

The car being in motion, the wheel D will be revolved by the contact of its picks with the snow, etc., in the grooves of the rails; the several pickers cut these masses to pieces, and the following mould-boards take them off and carry them from the track.

Claim.—The method of cleaning snow or ice or other like obstacles from grooved railroad rails, by means of a picker D and mould-board or scraper F, substantially as shown.

No. 10,716.—Joseph Leeds.—*Improvement in Cooking Stoves.*—Patented March 28, 1854.

The nature of this invention consists in forming the fire-box of a series of vertical tubes, through which air passes from a chamber below separated from the ash-box, and becomes highly heated, and passes up underneath the top plate and around the oven for cooking purposes; and in so arranging the oven into which hot air may be introduced, if required, that more of its sides shall be in contact with the products of combustion, but surrounded by hot air.

In the figure A an air-chamber, provided with a register, is formed underneath the stove. The fire-box D is composed of a series of tubes E, which connect the chambers A and F. The air passes from chamber A, through tubes E, into the chamber F, and from thence around the oven G. The products of combustion pass through the flue which surrounds the hot-air flue.

Claim.—A fire-box formed or composed of a series of vertical tubes, through which air is to be introduced to be heated, in combination with the air space under the top plate and around the oven, substantially as described.

Also, so arranging the oven that it shall not be in contact with any of the plates which are directly in contact with the heated products of combustion, but be heated by hot air substantially as described.

No. 10,717—HENRY UNDERHILL.—*Improved Hand Printing Press.*—Patented March 28, 1854.

It is stated, as an imperfection of power presses, that when, from any irregularity in the supply of sheets of paper to be printed, inconvenience is experienced, as the types are liable to injury from the action of the platen without an intervening sheet of paper.

The inventor has for his object the remedy of this evil, which he claims to have accomplished by operating the platen by hand intermittently in connection with a reciprocating double-frisket carriage, whose movement is derived from a continuous rotary motion, whether produced by hand or power, so that as the carriage brings the frisket of each end alternately under the platen, the latter may be made to descend at the will of the attendant, and independently of the movement of the carriage, so that its depression may be omitted if a blank sheet is not placed over the form.

No. 10,718.—EPHRAIM SIZER, TITUS SIZER, EMERSON SIZER, and AMOS HALLADAY.—*Improvement in Sacket's Braiding Machine.*—Patented March 28, 1854.

In the braiding machine of Sacket, of which this is an improvement, the racers are obliged to cross singly from one carrier to another, forming stitches with but a single thread. The object of this invention is to obviate this defect, and construct the machine so that the operator can form stitches of two, three, four, or more threads. The defect above stated arises from the use of the fly guide, which is dispensed with in this invention, using, instead, stationary spring-guides, together with tail-guides upon the racers.

The main features of the machine are the same as in Sacket's invention. The racer, which in the drawing is represented by *a*, has the same construction as Sacket's, except the tail-guide *b*, by the addition of which to the racers they are enabled to run in trains of two, three, or more; *c c* are the carriers similar to those of Sacket. The spring guides *d* are attached to the frame A by the bolts *e*, in the position given to the fly-guides of Sacket, above and below the carriers, between each alternate pair.

Claim.—The construction of the racers with the tail-guides *b*, substantially as described, for the purpose specified. The combination of the spring-guides *d* with the flanges *f* on the carriers *c c*, substantially as and for the purpose herein set forth; guiding the racers by means

of spring and tail-guides operating either on the interior or exterior of the shell or circle, substantially as herein set forth.

No. 10,719.—JAMES BAXENDALE, assignor to J. BAXENDALE and JAMES FERGUSON.—*Improved method of operating the Doctors of Calico-printing Cylinders.*—Patented March 28, 1854.

The object of the invention is to produce an irregular traverse motion of the doctor of a calico-printing cylinder, in order to prevent the usual injury to the engraved surface that results from the usual regular traverse movement.

On three stationary journals D E F, projecting inwards from the inner surface of the plate B fastened to it, three spur gears, G H I, are made to revolve; the centres of their journals are arranged respectively in the vertices of an equilateral triangle, and they are each placed a like distance excentrically to the centres of the gear-wheels. The pinion gear K is made to engage with the three excentric wheels G H I, and thus a compound traverse motion is produced.

No. 10,720.—SOLOMON ANDREWS.—*Drop and Bed-die Machine for Forging and Punching.*—Patented April 4, 1854.

The *claims* allowed indicate the invention, and cover, substantially—

1st. Lifting the punch or drop by a pinion E, fitting into deep notches *b*, in the stem.

2d. A hollow stem *g* and punch *o*, for holding cooling liquids.

3d. Secondary stamp H, between stamp and die G, acting as a follower to cut off the blank, and as a releaser.

4th. Combination of devices for elevating the movable centre of the bed *r*, the cam lever t^1, and the arc z^1, to lift up the nut after it has been punched.

5th. The wedge lever F, in connection with the spring *f* and its lever or arm, for effecting the complete disengagement of the clutch-teeth.

No. 10,721.—BERNARD J. LA MOTHE.—*Improvement in Railroad Cars.* Patented April 4, 1854.

An improvement in car-bodies made of straps of metal crossing each other, consisting in increasing the number of straps so that at least three shall meet at each intersection.

Claim.—The construction of the frame of railroad cars with continuous elastic steel bands, or equivalent material, in the manner and for the purpose set forth in the foregoing specification, namely: The transverse bands in pairs, each of one single piece, to extend from one side of the frame to the other, at equal or respective distances, bent to the proper shape of the car, and the longitudinal bands to pass single

between the above, forming with them rectangular squares; and the three bands repeatedly in such position to be firmly secured together by means of rivets or screws in each intersection of the rectangles formed by them; thereby obtaining with said material, and from such an arrangement, combined with lightness, far greater strength and elasticity than the cars now in ordinary use possess, and consequently affording far more protection to life in cases of accidents in railroad travelling.

The inventor does not claim the frame of single transverse and single longitudinal bands, but limits his claim to the use of single, double, triple, or multiplied longitudinal bands, combined with single, double, triple, or multiplied transverse bands, so that there shall not be less than three bands, while the number may be increased ad libitum, in each intersection of the angles formed by them, the whole being constructed and used in the manner and for the purpose above mentioned.

No. 10,722.—Benjamin A. Lavender and Henry Lowe.—*Improvement in treating Cane Fibre for Paper and other purposes.*—Patented April 4, 1854.

The improvement and claim consist in breaking down woody fibres of cane and other like plants, and dissolving the gummy and other foreign matter therefrom, by means of muriatic or sulphuric acid, of the strength of 10° Baumé, or thereabout, preparatory to making hemp for bagging, rope, paper-pulp, &c., in the manner substantially as set forth.

No. 10,723.—Rodney Miller.—*Improvement in Carriage Tops.*—Patented April 4, 1854.

The lever C, jointed to the lower end of F, can be depressed by the foot and raise the top. It is supported in any required position by springing sidewise into notches.

Claim.—The combination and arrangement of the rods or straps H, E F, either separately or combined with the cranks D^1, and the arms I, in the manner specified, and operated by the lever C, for the purpose of raising and lowering carriage tops, in the manner set forth.

No. 10,724.—Oldin Nichols.—*Improved Chain-cable Stopper.*—Patented April 4, 1854.

This improvement consists in the arrangement of the pawls B and D, with studs *a a* on the roller-shaft A, and teeth *b b*, so that every link is held.

No. 10,725.—Oldin Nichols.—*Improvement in Chain-cable Stoppers.*—Patented April 4, 1854.

This improvement consists in having a ridge *a* in a circular groove, by which each link is so far turned as to bring it in a proper position for being held by a pawl.

No. 10,726.—ELIJAH ROBERTS.—*Water Wheel.*—Patented April 4, 1854.

The *claim* consists in the arrangement of the rods D, which slide through the gates *a a*, so that all of them may be opened or closed simultaneously, or allowed to close by the pressure of the water when not obstructed by foreign obstacles.

This is effected by turning the shaft J, which, by means of cogs *e* and worm *f* on shaft, revolves the driver E; this actuates the rods D, and turns the gates *a* about pivots *s s*, thus closing or opening them as stated.

No. 10,727.—DAVID A. WELLS.—*Improvement in process for obtaining cellulose from vegetable substances.*—Patented April 4, 1854.

The improvement and claims consist in removing coloring and resinous matters from cleaned and dressed flax, hemp, and other equivalent textile and fibrous materials designed to be spun, felted, &c., by means of weak acid of about 3° Baumé; also, in the employment of caustic alkalies, as specified, to obtain cellulose from vegetable substances for the manufacture of paper and other purposes, in combination with the use of alkaline earths, substantially as specified, to preserve or restore the caustic state of the alkalies; and finally, in combination with the process stated, subjecting the products thereof to the action of a solution of efflorescent salts, substantially as and for the purposes specified. No illustration.

No. 10,728.—WILLIAM H. AKINS, assignor to SAMUEL J. PARKER.—*Improvement in Cops for Sewing Machines.*—Patented April 4, 1854.

The nature of this invention consists in forming a cop or bobbin without spindle or spool, in combination with a shuttle, when the thread is drawn or fed out from the inside of the cop, by which means a uniform tension on the cop-thread is secured as it is drawn from the shuttle.

The cop is a spirally wound mass of thread, recurring at each end alternately until it is wound large enough to fill the shuttle, when a few circular windings are given upon the whole mass preparatory to securing the external end of the thread.

In the figure, A is the cop or bobbin, and B the external end of the thread emerging from the inside by a hole at one end.

Claim.—The use of a cop or bobbin, without spindle or spool, in combination with a shuttle, or what is equivalent thereunto, when the thread is drawn or fed out from the inside of the cop or bobbin, by which means a uniform tightness or tension on the cop or bobbin thread is secured as it is drawn or fed out from the shuttle, as described.

No. 10,729.—L. D. Goodwin.—*Water Wheel.*—Patented April 4, 1854.

The first part of this invention is the self-regulating gate *a*, which is hinged across the flume at a^1; a lever or handle *v* is weighted as a steelyard. This arrangement allows more or less water to pass, as the increased or decreased labor of the wheel may require.

The second part relates to the peculiar construction of buckets, which will be seen in claim.

Claim.—The form and proportions of the buckets as specifically set forth, commencing in a true circle at a tangent to the outer periphery, and terminating in a straight line, fifteen degrees in length, at the inner curve, and at a tangent thereto, as herein fully explained.

Also, the self-regulating gate to the scroll, constructed and arranged in the manner and for the purpose set forth.

No. 10,730.—Willis Humiston.—*Improvement in Machines for making Candles.*—Patented April 4, 1854.

The novelty in the apparatus is restricted to the devices for the control of the wick-spools *d*, and of the guides F, to keep the wicks in the centre of the moulds C during the casting.

Claims.—1st. The wick-tightener E, so arranged that the wicks may be uniformly stretched before the material is run into the moulds; and the friction or strain be removed therefrom before the candles are drawn from the moulds, to prevent the breaking of the wicks, substantially as specified.

2d. In combination with the wick-stretchers E, the centering-bar or plate F, with its stop or guide G, for first properly centering the wick at the top of the mould before it is stretched and held, substantially as specified.

No. 10,731.—Eastman R. Ball.—*Improvement in Bedstead Fastenings.* Patented April 4, 1854.

This fastening consists of a bracket *a*, attached to the bedstead post, and carrying a vertical cone *v*, which is to be received into a conical hole in the under side of the bedstead rail, as shown in the drawing.

Claim.—Fastening the rails to the posts of a bedstead by means of the combined sustaining brackets and conical fastening-pins *a v*, secured to the posts, and the conical holes in the under sides of the rails, arranged and operating with each other substantially as herein set forth.

No. 10,732.—Solomon G. Booth—*Improvement in Machinery for Corrugating Sheet-metal.*—Patented April 4, 1854.

The invention consists in making the base strips of the bed-dies and of the cam-shaft adjustable, so that the dies may be used for corrugations of different depths.

The claim is to the construction and arrangement of the dies so as to adjust them to any depth of corrugation and thickness of metal, by

having the pieces C, C^1, C^2, separate from the parts D D^1, so that they, as well as the cam-shaft, can be raised and lowered to make a deeper or shallower corrugation, the whole being combined and arranged substantially in the manner and for the purpose set forth.

No. 10,733.—BENJAMIN EAKINS.—*Hydrant Cock.*—Patented April 4, 1854.

The specification in this case merely names the parts composing a complicated apparatus, and affords no assistance to understanding its peculiar advantages.

Claim.—The peculiar construction of the valve, with the manner of opening and closing the same, herein described and represented.

No. 10,734.—A. K. EATON.—*Improvement in Amalgamating and Washing Gold and Silver.*—Patented April 4, 1854.

The improvement consists mainly in the use of zinc plates in the form of a perforated Venetian blind *b b*, or of a trough *d*, in the separation of gold, by means of mercury, from ores containing sulphur, in order to preserve the bright surface of the mercury, and thus increasing its affinity for the precious metal, the affinity of zinc for sulphur being greater than that of mercury; as well as for the purpose that the minute particles of gold, which often float away, be caught and more readily amalgamated.

Claim.—The employment of an alloy of mercury and zinc, instead of pure mercury, in the process of amalgamating precious metals, substantially as herein set forth.

No. 10,735.—HENRY W. FARLEY.—*Improvement in Railroad Frog-Guards.*—Patented April 4, 1854.

The guard B is cast together with the chairs D, for supporting the rail A.

Claim.—The supporting of the track-rail opposite the frog on the projecting base of the frog-guard, so that, without the intervention of bolts or other fastenings liable to become loose or deranged, the guard is held down by the track-rails. No claim is made to supporting the frog-guard and adjacent track-rail in a common chair, as that is neither new nor capable of affording the security against accident which this invention is to afford.

No. 10,736.—PHANUEL FLANDERS.—*Improvement in Cranberry Winnower.*—Patented April 4, 1854.

This is a machine for winnowing cranberries, presenting some peculiarities not found in grain cleaners, namely: the cushioned hopper or separator chute K, exposed to a blast created by fan B, the inclined separator or cleaner D having the slats constantly wider apart as it

descends, to separate rotten and defective berries; also, the lever arms I, with the slotted head, to give a sudden jerking motion to the separator D: the whole set in motion by gearing J, H, G, F.

Claim.—The cleaner D and the arms I, or their equivalents in substance, and the separator K, when the same is made and operated substantially as set forth and specified, for the purpose of cleaning cranberries.

No. 10,737.—W. GATES and H. J. HARWOOD.—*Match Machine.*—Patented April 4, 1854.

This machine completely finishes the match and discharges it. An endless apron A, fig. 1, carries a series of clamps *f g*, fig. 4 and fig. 3, which, as they pass the cutting-tool at M, fig. 1, seize a row of sticks just as they are cut from the block, and carry them on, dipping their lower ends in the sulphur at P, and then in the igniting fluid at R. As these clamps pass the discharging spout P, fig. 1, a hammer U descends and drives the row of matches out of them into a proper receptacle.

Claims.—1st. The employment or use of the endless chain A, formed of a series of clamps constructed and arranged substantially as herein shown, for the purpose of receiving the match-sticks from the cutting-tool and conveying them to the sulphur and igniting compounds, with which their lower ends are covered, as shown and described in the body of the specification.

2d. The peculiar form of the cutting-tool D, as herein shown and described, viz: said tool being formed of a series of circular cutters *l*, connected by semicircular cutters *m*, by which form the match-sticks are placed in the clamps of the chain A, at a sufficient distance apart to prevent their lower ends from being connected together when immersed in the sulphur and covered with the igniting compound; said tool also, by being constructed as described, cutting the match-sticks smoothly and easily from the block.

3d. Opening or parting the clamps of the chain A at the proper time, or when each clamp is directly over the cutting-tool D, by means of the wedge H, operated by the cam J, or its equivalent, for the purpose of allowing the match-sticks to enter the clamps as the cutting-tool ascends to the top of the block, as herein shown and described.

No. 10,738.—CHARLES GOODYEAR.—*Improvement in treating Vulcanizable Gums.*—Patented April 4, 1854.

The improvement and claims consist in the method of manufacturing compounds of caoutchouc, gutta percha, and other gums susceptible of vulcanization, in sheets, by covering the surface or surfaces of the sheets of gum with sheets of paper or cloth, or the equivalent thereof, and then confining the same during the process of vulcanization by pressure between plates of metal or their equivalents, or otherwise, substantially as described. No illustration.

No. 10,739.—CARMI HART.—*Veneering Machine.*—Patented April 4, 1854.

Claims.—1st. Cutting veneers or other thin stuff by giving to the shaving knife *c* a rectilinear movement towards and through the log, at the same time that a rectilinear movement is given to the log, either transversely or diagonally to the movement of the knife, so as to produce a long continuous drawing cut, as described, whether the said movement of the knife and log are produced by the precise arrangement of mechanical means described, or any other substantially the same.

2d. Making the ways N N, upon which the log-carriage moves, adjustable, as described, relatively to the ways *a a*, A A, in which the knife and cutting-table move, for the purpose of giving more or less of a drawing action to the cut, as the nature of the stuff to be operated upon may require.

3d. Attaching all the necessary appendages for holding the log and feeding it to the knife to a turn-table L, (Fig. 2,) capable of being adjusted circularly within the main frame, or part K, of the log-carriage, as described, for the purpose of presenting the grain of the stuff at any desired angle to the edge of the knife or direction of the cut.

4th. Suspending the log or block above the knife, by griping it with clamps Y Y, which form part of a suspending-head, which supports the weight of said log or block and prevents its dragging over the edge of the knife during the backward movement of the latter, and only allows it to be lowered under the control of suitable feeding mechanism.

5th. Setting the lever handle *x*, which holds the clamps upon the log, free from the notch-bar 12, by which it is secured for that purpose by means of the bar 33 and the inclined block 35, of which the former is attached to the suspending-head, and the latter to some fixed point on the turn-table of the log-carriage; and the former is made to slide by coming at a proper time in contact with the latter in such way as to raise the lever-handle, as herein described.

6th. Making the slots in the clamps which receive the bar *m* and screw *n* of such length that, after the clamps are arrested by coming in contact with the proper part of the log-carriage or turn-table, the motion of the follower and the other parts of the feed-motion may continue till it is desirable to stop them, as herein described.

7th. The mechanism herein described for rendering the pawl 15 of the feed-motion inoperative, and thereby stopping the descent of the suspending-head and the feed of the log at the proper time, to wit: the bar 24, pin 26, spring 27, rod, arm, shaft, feather 31, and angle-piece 32, the whole being combined and applied substantially as herein set forth.

No. 10,740.—STEPHEN HEDGES.—*Combined Table and Chair.*—Patented April 4, 1854.

Claim.—The manner herein described of rendering a table of ordinary construction susceptible of being combined with a chair, and of being used as a smaller stand or writing desk and chair combined, by

constructing the table in two sections, and jointing said sections together, one of which forms a chair with a flap or removable top; and the other a stand, smaller table, or writing desk, with a stationary top, having the flap of the chair hinged to it; one end of each section being jointed together by a hinge upon which the chair turns when it is desired to use the table as a stand, or writing desk and chair combined, or after it has been used as such, substantially as herein described and set forth.

No. 10,741.—L. Otto P. Meyer.—*Improvement in treating Caoutchouc and other Vulcanizable Gums.*—Patented April 4, 1854.

The interposing between sheets of gum, &c., to be cured, sheets of flexible material, when the series of sheets thus piled are confined between plates of iron during the process of vulcanization, being disclaimed, the improvement and claim are restricted to covering the surface of what is known as the hard compound of caoutchouc with tin foil, or other equivalent substances, to preserve the form previously given by embossing or moulding, the contact of the tin foil during the curing process having the effect to preserve the form and the surface without pressure or moulds. No illustration.

No. 10,742.—Morris Mattson.—*Improvement in Syringe.*—Patented April 4, 1854.

The invention is confined to a removable brace *d*, passed through head *b* of piston B, to rest the thumb upon while drawing up the piston, and thus enabling the patient to use the syringe with only one hand. Also, to the perforations *v v* around the lower extremity of tube K, by means of which a single loose disk *h* is performing the part of a reciprocating valve.

Claims.—1st. The combination of the thumb or finger rest *d* with the barrel A and piston B, for the purpose essentially as specified.

2d. The upper ring-valve seat *i*, and the perforated tube K, in combination with the disk or valve *h*, and its seat and chamber, the same being made to operate substantially as described.

No. 10,743.—John Nesmith.—*Machine for making Wire Netting.*—Patented April 4, 1854.

This invention consists in certain devices for revolving the wires at the same time that they are being twisted.

Claims.—1st. Revolving the wires by the means substantially as described, for the purpose of keeping them parallel to each other, so that they cannot get entangled during the process of netting.

2d. Vibrating the wires alternately from right to left, and from left to right, before or after, or at the same time of twisting them, the said wires, together, by means of the cams R and U, the shippers S S and V V, connected with the cams by the levers T T.

3d. The jaws or clamps G G, for the purpose of drawing the wire through the machine.

4th. The two planes *d d*, and their mechanical equivalents, with the cams and levers for operating the same.

5th. The wire-reels D and movable reel-stands I, with the friction-springs for the reels, and holes through either end of the said reel-stands for admitting, protecting, and guiding the wire, or the mechanical equivalents, of said reel and reel-stands.

6th. The feeding and twisting gears J E X, with their centres perforated to admit the border or warp wires passing through the same, and the said gears having slots cut in them for the receiving and guiding the ends of the stands and wires in the same, substantially as set forth, &c. No illustration.

No. 10,744.—ABIEL PEASE.—*Improvement in Metal Drills.*—Patented April 4, 1854.

This improved drill is designed for boring heavy metal, and has in view the directing of the drill longitudinally.

Claim.—Constructing a drill with a notch *a*, with two cutting edges, which leave a guiding cone in the centre of the hole as it is bored, which is cut down as the drill advances, in combination with the bevelled edges of the lips A B, substantially as specified.

No. 10,745.—JOSEPH SOLLENBERGER.—*Improvement in Training the Grape-Vine.*—Patented April 4, 1854.

The improvement consists in furnishing the training-posts for grape-vines with wire hooks, fitted by their form and elasticity to hold the vine in place when inserted into them, thus dispensing with tying the vine, as practised heretofore.

Preceded by a disclaimer of the post in itself, and a wire hook in itself, the claim is restricted to a training-post composed of a staff and hooks at proper intervals on the staff, for the purpose of rapidly training and dressing vines in the manner described, and at proper season, the staff and hook being prepared and located all ready for instant action, when the season for vine-dressing arrives; the whole being combined and used substantially in the manner and for the purposes described.

No. 10,746.—JACOB EDSON.—*Improvement in Pumps.*—Patented April 4, 1854.

The design of this improvement is to prevent the accumulation of air within the cylinders of double-acting force pumps. The drawing represents a vertical section through the upper portion of the pump, taken through the centre of the eduction pipe.

Claims—The cap M, with its valve *f*, constructed and arranged in the manner described, and for the purpose set forth; the cap being

cut away upon one side for the accommodation of the valve, and packed at the points C, to prevent the return of the water from the passage K to the cylinder E, the valve being made to bear immediately upon the upper end of the cylinder; by which construction and arrangement of parts the inventor is enabled to force out from the cylinder, each time the valve *f* is raised, any air which may have collected above the piston G, and thus effectually avoid the air-cushion above the piston.

No. 10,747.—JAMES MCCARTY.—*Mode of manufacturing Wrought Iron Tubes.*—Patented April 4, 1854.

The invention consists—

1st. In heating the skelps for welding in a reverberatory furnace, and on a sand bottom, with raw coals, either anthracite or bituminous, as fuel, its combustion being excited by means of a forced blast. The fuel is burnt upon a grate, separated from the sand bottom by a bridge, whose construction is such as to produce a horizontal reverberation of the flame, which, in connexion with the reverberation downwards, which is produced by the crown of the furnace, insures a more thorough and equable dissemination of the heat among a quantity of skelps than can be produced by any means heretofore known.

The claim is to the method of operating as described, namely: heating the skelps in a furnace, constructed substantially as herein set forth, with raw coal as fuel, whose combustion is maintained by a blast of air forced into the furnace, under pressure, as set forth.

No. 10,748.—W. S. LOUGHBOROUGH.—*Bench-Plane.*—Patented April 4, 1854.

This invention consists in a convenient arrangement of the cap *l* which slides in grooves on each side of the opening in the stock, in combination with an adjustable bit *v*, and screw *d*.

The construction and the mode of adjusting and operating the plane is sufficiently shown in the drawing. The claim is to the combination of the adjustable cap *l* with the screw *d*, by which it is operated, and to the manner of connecting the said cap *l* with the stock of the plane.

No. 10,749.—GEORGE W. LIVERMORE.—*Crozing Staves.*—Patented April 4, 1854.

This machine crozes and chamfers the staves as follows: a number are placed in the hopper *r*, and by their weight descend upon two endless belts *s s*, which revolve by means of drums *m m;* on these belts stops *n* are placed, and as the belt moves simultaneously, one stave at a time is moved to its position under the pressure bars *w*, and remains there until the cutters V V croze and chamfer each end; the belt, at the next move, drops the finished stave.

The claim is to the combination of hopper *r*, bars *w*, drums *s*, and knives V.

No. 10,750.—Tyler W. Lafetra.—*Improvement in Drying Tobacco.*—Patented April 4, 1854.

The tobacco to be dried, in accordance with this invention, is spread upon a wire grating attached to a frame, and is confined to its position by a flap or door, carrying pins or studs, which press upon the leaves. Neither the rotation of the wheel, nor the currents of air forced into the case or cylinder, in the process of drying, displaces them. A fan-blast may be used, or other convenient methods.

Claim.—To the drying tobacco by forcing currents of air through it, in combination with the confining thereof, by means of the chambers or cells, formed and constructed as described; or by any other mode that is substantially the same, and will produce the same result.

No. 10,751.—John C. Ogden, assignor to Charles S. Ogden.—*Rail-road-Chair Machine.*—Patented April 4, 1854.

The claim is the making chairs for railroad rails by passing the hot-milled bars direct from bar rolls, out of which chairs are to be made, without reheating, and, by the same working hands usual at roll-train, between a pair of rolls, constructed and operating on the principle substantially as herein described and illustrated; the punches and dies for punching and forming the chairs being secured around the peripheries of said rolls, substantially as described.

No. 10,752.—James MacGregor, Jr.—*Improvement in the construction of Tea and Coffee Pots.*—Patented April 4, 1854.

This invention consists in surrounding the lower portion of tea-pots with an outer case, having a mouth-piece for the introduction of water between the outer case and the tea-pot.

The water space should be of sufficient capacity to prevent evaporation from reducing the water below the bottom of the pot. The mouth-piece is always kept open when the pot is exposed to heat, thereby allowing free escape to the steam made between the two cases, and thus preventing the water in the pot from becoming over-heated.

In the drawing, A is the cover of the spout, B is the cover to the pot, C is the space for tea or coffee, D is the water space, E is the mouth-piece.

Claim.—Having the pot where the tea or coffee is prepared air-tight, and so regulating the heat that is applied to the heating of the same, that a small pressure by the covers prevents it from boiling, and, consequently, from evaporation, while the tea or coffee is being prepared, in the manner and for the purpose substantially as above set forth.

No. 10,753.—Elbridge Marshall.—*Improvement in Seed Planters.*—Patented April 11, 1854.

The seeding device in this planter consists of known revolving hoppers U, perforated at the bottom for the transmission of the seed; they

are, however, acted upon, whatever their number may be, by one single vibrating bar H, which not only rotates them by means of the pawls S, but serves also as a valve, its perforations *m* (fig. 3) passing alternately under the perforations *j*, causing the seed to drop into the seeding line W. Another improvement consists in the device to control the precise moment of the vibration of the bar H aforesaid, and thus to control the distance of one dropped seed from another. This is accomplished by suspending or accelerating the movement of lever F, vibrating bar H, and being in its turn vibrated by cam C, on the driving roller B, by means of turning crank O backward or forward; this crank O being, by gearing N, M, K, J, G, made to determine the distance of cams C from the cams E, and thus to determine the movement of their passing each other, and, consequently, to determine the movement of the vibration of lever F.

Claims.—1st. The cams C E, having two rows or sets of inclined planes upon their faces, said inclined planes being placed oppositely on concentric circles, for the purpose of creating an equal pressure upon the cam E, and connecting said cam E with suitable gearing substantially as shown, whereby its position upon the shaft D may be changed, and the seed dropped at a greater or less distance apart, whenever the crank O is operated or turned by the hand, as herein shown and described.

2d. The bar H performing, in combination with the circular plates V underneath the hoppers U, the office of a valve, and simultaneously rotating said hoppers by its vibrating motion; the above parts being arranged and operating substantially as described.

No. 10,754.—WILLIAM BALL.—*Improvement in Mills for Grinding Ores, &c.*—Patented April 11, 1854.

The grinding balls D are propelled by a weighted shaft and driver C, giving an oblique pressure. The step of the shaft is loose, and yet prevented from getting out of gear by the projections P, so as to allow of a rocking motion when the balls pass over large pieces of ore. The sieve X for the powder is perforated only on its under side, so as to screen upwards and prevent choking by coarse matter.

Claims.—The mode, substantially as herein described, of applying pressure to the balls—that is to say, making the pressure diagonally or obliquely to the line of axis of the pressing shaft, or obliquely to the vertical diameter of the balls, as a distinct feature from that which is known as the turn-table machine, where the pressure is on the top of the balls; this oblique pressure being effected by the curved central driver, or its equivalent, as herein set forth.

Also, the rocking step in combination with the oblique pressure upon the balls, in the manner and for the purposes set forth.

Also, making such screen with a conical head, having the lower or conical surface the screening part, for the purpose specified.

No. 10,755.—THOMAS CARTER.—*Improvement in Seed-Planters.*—Patented April 11, 1854.

The device consists of a double hollow conical wheel C, which is a reservoir for the seed, and mounted in a seed-barrow frame *a*, and has a range of peripheric seed-tubes *g g*, the external mouths of which are covered by spring valves L, shutting up said mouths while the tubes *g* are preparing the holes for the seed, and as the wheel revolves opening as soon as the tubes have left the holes, to give passage to the grain into them.

Claim.—Seed-discharging apparatus in the periphery of the seed-wheel, the tube or apparatus *g*, the escapement wires *i i*, and the protecting spring valves L, in the manner and for the purposes described.

No. 10,756.—STEPHEN COLWELL.—*Improvement in Iron Buildings.*—Patented April 11, 1854.

Claim.—The mode of constructing the skeleton-walls of buildings of any desired thickness, by placing vertically upon each other rectangular frames or hollow squares of cast iron, and sections of the same, like bricks or blocks of stone, but not breaking joints as in laying brick or stone, the said frames being connected together and levelled, substantially as above described, the skeleton-wall being separate from the covering of the building, but adapted for receiving on its exterior or interior surface a covering of plates of iron, or other material, removable at will.

No. 10,757.—SAMUEL J. PARKER.—*Improvement in Sewing Machines.* Patented April 11, 1854.

The nature of this invention consists in placing the axis of the eye of the needle parallel to the line of the feed-motion, thereby avoiding the bias of the stitch. In the drawing, E is the point where the needle pierces the material to be sewed, T T the line of the feed-motion; P is the feed-wheel; O is the shuttle in its race N.

Claim.—That combination that secures the relative position in which the needle's eye is placed to the movement of the material or feed-motion, and the position of the shuttle and its race, resulting therefrom, when the needle is straight and the table on which the material to be sewed is horizontal; said relative position meaning the longitudinal axis of the shuttle and its race at right-angles to the feed-motion, and the consequent position of the needle's eye therefrom, so that a line drawn through the needle's eye when in the act of passing the centre of the material sewed, shall coincide with the line of feed-motion, and not be at right-angles therewith; and this, for the purpose of rendering the stitch more nearly perfect and straight than it otherwise would be, the combination and purpose substantially as described.

No. 10,758.—HIRAM STAFFORD.—*Improvement in Rat-Traps*—Patented April 11, 1854.

The peculiarity of this trap consists in the arrangement by which the entrance always remains open until the caged animal attempts to escape by the passage through which it entered. The operation of the trap is as follows: The animal enters between the bars, which are standing as represented at I, and steps on the tilting-board B, when, by a special arrangement, the bars I are thrown towards each other and close the entrance; when the animal leaves the tilting-board, the weight C causes it to rise, and thus open the entrance again. This operation is repeated every time the animal attempts to escape; but at all other times the trap remains open and admits of other animals entering like the first, but equally prevents their passage out again.

No. 10,759.—THOMAS E. SEAY.—*Improvement in Brick-Machines.*—Patented April 11, 1854.

A represents the common pug-mill, from which the mixed clay is delivered down inclined planes into a receptacle E, on each side. H H is a pair of pistons connected together in a single carriage, made to traverse back and forth by a toothed wheel *d*, and a toothed rack *c*. At the extreme limit of their motion, one of the pistons H leaves a free communication between the receptacle E and the pressing-box G, into which latter the clay passes, and from which, on the return of the piston, it is forced into the moulds *f*, placed in a recess to receive it, as shown in the figure. The mould, being thus filled, is raised out of its recess by lifters T, while it is separated from the clay in G by the descent of a cutter O. The lifters T T also carry with them another cutter, or rather gate, K, to follow the moulds and confine the clay in G. The cutter and lifters T T are both operated simultaneously by depressing the foot-lever L, which acts upon T T by means of a pair of levers R R, pivoted at *n*, and at the same time draws down a cross-bar *l*, attached to vertical sliding-ways *n n*, that carry the cutter O with them.

The receptacle E communicates with an open box F, outside the pug-mill, and across it run a series of grate-bars *a a a*. These bars serve to arrest stones or other bodies; which are then, by the action of the passing clay, gradually worked along the bars into the box F, from which they can be removed.

Claim.—The combination of the tilting-board with the swinging forks and their apparatus, precisely as shown in the drawings, and for the purpose and in the manner substantially as herein set forth and described.

No. 10,760.—WILLIAM A. SHAW and GEORGE PARKER.—*Improvement in the Apparatus for Street Gas-Lamps.*—Patented April 11, 1854.

This invention consists in substituting for the stop-cock to prevent the flow of gas, a cap to be placed over the top of burner. The cap

corresponds on its inner surface with the shape of the burner, and is lined with a band of vulcanized rubber, so as to fit air-tight over the mouth of the burner.

Claim.—As a substitute for the stop-cock to stop the passage of the gas, the above described cap, lined with vulcanized rubber or other proper material, which cap fits air-tight over the mouth of the burner, as above set forth.

No. 10,761.—HENRY SIGLER.—*Improvement in Fish-Hooks.*—Patented April 11, 1854.

This invention is to improve "Sockdologer" fish-hooks, whereby they are rendered more simple in their construction, perfect and sure in their operation, and less dangerous to handle while baiting.

The improvement consists in making the top portion B of the main hooks elastic, and so attaching them to the vertical guide-pieces C D that they will be made to serve as springs for giving action, and forcing them together, and, with two levers E, or toggle-arms, form a toggle-joint for forcing the hooks apart, and retaining them set. A common bait-hook G is attached to the lower extremity, F, of a regulating slide, and so situated that its end will be some distance above the ends of the spring-hooks A, between which the fish must place its head to get at the bait.

No. 10,762.—CHARLES LEAVITT, assignor to STERLING R. COCKRILL.—*Improvement in Machines for Cleaning Cotton.*—Patented April 11, 1854.

The nature of this invention consists in a method of cleaning cotton and freeing it from motes, dust, and impurities, previous to ginning it; the latter operation having a tendency to incorporate the dust and impurities intimately with the fibre. By preceding the ginning operation by this method of cleaning cotton, it presents a better appearance, the fibre being less bruised, rendering the cotton more marketable and of a superior quality.

The longer sides of a frame *a* are enclosed by boards *v* sufficiently high to embrace the concave screen *c*, and low enough to touch the ground. Circular openings are made in each side *v* to admit air to the wind-wheel *f*, and large enough to give access to the heads of the revolving screen *g*. The screen *c* is made of open wire-work fastened to armular heads *h*, which are secured to the sides *v*. The concave is supported on the outside by ribs *i*, fastened to the heads *h*, and these ribs are furnished with teeth projecting inwardly through the wire-work, and at sufficiently wide distances apart to pass between corresponding teeth or similar ribs on the inside of the revolving screen *g*, which projects outwardly through the wire-work thereof. The concave screen *c* has a suitable opening at *j* for the admission of the cotton above the hopper bottom *k*, and for its abduction below the hopper by the revolving stripper *l*, which lies athwart the same end of the

frame. The revolving screen *g* is attached to a head *m*, which is driven by the power used to operate the machine. The stripper and wind-sheet are driven at high velocities, while the revolving screen is driven at comparatively low speed, so as to carry the cotton slowly without breaking the seed or the fibre, giving the wind-wheel an opportunity to blow out the impurities as the toothed ribs of the screen loosen the fibres. An ordinary rake X is used and fixed to the machine for the purpose of cleaning the stripper of the cotton as it gathers from the screen.

Claim.—The method of arranging the several parts involved in extracting the motes, dust, and other impurities from cotton previous to, and preparatory for, ginning the same, substantially in the manner and for the purpose described; that is, combining a wire and screen concave with a revolving wire screen cylinder, or their equivalents, and a wind-wheel or fan revolving within the cylinder, both cylinder and concave being armed with teeth, set in ribs so distant apart with regard to the teeth, as to permit the cotton-seed to pass while the fibre alone is loosened, the revolving screen running slowly, in comparison with the wind-wheel, which is driven at great velocity, thereby adapting the machine to the particular purpose specified, viz: freeing cotton from motes, dust, and other impurities, while attached to the seed, previous to ginning the same.

No. 10,763.—JAMES HARRISON, Jr.—*Improvement in Sewing Machines.* Patented April 11, 1854.

This invention consists of a contrivance for tightening that part of the stitch which is formed by the needle-thread. The needle bar is furnished with a spring, a roller, and a screw, so combined and arranged as to hold the needle-thread secure at a point between the spool which carries it and the needle, to prevent its delivery from the spool except during such a portion of the latter part of the needle's upward motion as may be desirable. This contrivance produces any degree of tightness that may be desired. The invention also consists of a contrivance for tightening that part of the stitch which is formed by the shuttle, by means of a drag-bar attached to the shuttle, which checks the delivery of the thread from its bobbin, except during such a portion of the back part of the shuttle's movement as may be desirable, when it is allowed to release the thread by the action of a liberating piece projecting on one side of the shuttle race. This liberating piece is adjustable, and may therefore be made to lengthen or shorten the delivery of the thread, and thereby control the tightness of the stitch. The invention further relates to a method of constructing the shuttle whereby great facility is afforded for the removal and reinsertion of the bobbin, and for the passing of the end of the thread through the eye.

The drawing shows the construction of the machine.

Claim.—The combination of the spring Q, the roller S, and the screw or adjustable pin T, operating in the manner described, to prevent the delivery of the needle-thread for the successive stitches until each preceding stitch is drawn to the desired degree of tightness, and then to

cause sufficient out for the next stitch, thus regulating the tightness of that part of the stitch formed by the needle-thread. Also, the combination of the drag-bar T, attached to the shuttle, and containing the eye J, through which the thread passes therefrom; the spring K, for throwing the said bar into a position to prevent the delivery of the thread from the shuttle; and the adjustable, liberating piece V, operating as described, for the purpose of preventing the delivery of thread from the shuttle until after each stitch is finished, and then allowing only the quantity desired to be given out, whereby the tightness of that part of the stitch formed by the shuttle-thread is perfectly regulated.

Also, constructing the shuttle in two parts, viz: the sheet and cap, of which the latter is inserted into and withdrawn from the former endwise, as described.

No. 10,764.—Jose Toll.—*Improvement in Rat-Traps.*—Patented April 11, 1854.

The object of this improvement is to provide a receiving vestibule or chamber, which shall exhibit no signs nor taint of the animals caught, and in which the weight of the rats shall act with the power applied to remove them into a cell below. To effect this, the weighted cord *m* is wound up, and the hook *h* baited. The rat is supposed to enter by the opening *u*, and pulling at the baited hook disengages the catch *j*, and the partition *e*, in consequence, is suddenly moved forward, and the rat is imprisoned between the walls *e d*, and carried forward by the action of the weight *l*, until, brought over the aperture *v*, it falls by its weight into the cell *c*, immediately below. The weight draws the entrance chamber back to its original position, where it is held by the catch *j*, until sprung by another rat.

No. 10,765.—George W. Thayer.—*Improvement in Truss for Iron Bridges.*—Patented April 11, 1854.

A series of arches made to interlock by means of shoulders, as in figure 2.

Claim —The combining or arranging together a series of interlocking and overlapping metallic arched beams, or series of vertical suspension tie-bolts, extending from the lower chords to the crowns of the arches of the metallic arched beams, and a series of struts or tie-bolts extending from the lower to the upper set of chords; the whole, when combined and arranged, substantially as set forth, constituting a truss having great strength and advantages, as stated, and made with one long arched beam to extend over and embrace two or more of the arches.

No. 10,766.—Nathan Thompson, Jr.—*Life-Car.*—Patented April 11, 1854.

This invention consists in the use of webbing or sacking with wood or metal-bottoms and guide cords, so that the sack or bag extends when used, below the bottom of the boat.

Claim.—The extensible bottom, which may be stowed within the boat, or, when in use, drop below either side of it, constructed and applied to a life-boat, substantially in the manner and for the purposes herein described. Also, in combination with such an extensible bottom, the diagonal bracing cords, applied in the manner and for the purposes substantially as described.

No. 10,767.—JOHN WEBSTER.—*Lubricator.*—Patented April 11, 1854.

By means of a three-way cock G, a plug F, with a curved way J, in combination with the passages or channels B, E, D, and the cups A and C, the oil is forced by the steam into the cylinder.

The oil being poured into cup A, the plug F is turned so that its curved channel shall communicate with cup C. The plug F is now reversed so as to communicate with the steam and cup C. The lower plug G is then turned so as to allow the oil to pass into the cylinder, the steam being above it.

Claims.—The combination of the divided chamber with a three-way cock, one position of which admits oil to the chamber, but shuts off the steam; the other position shuts off the oil and allows the steam to pass from one partition of said chamber to the upper surface of the oil in the other, for the purpose substantially as described.

No. 10,768.—H. ALLEN.—*Boring and Mortising Machine.*—Patented April 11, 1854.

This machine is suited particularly to cutting elongated mortises. The material is secured to a carriage C, which is moved by the revolving shank cutter at H, this cutter having two edges cutting in planes at right angles with each other. After the cutter has entered to the required depth, the carriage is moved back or forth, as the case may be, until the mortise is finished. Stops f f^1 are moved by a treddle; these enter recesses in the lower side of the carriage C, and regulate the position and dimension of mortise. The cutter receives vertical adjustment, by means of its sliding frame O and set screws.

Figure 1, side view; figure 2, front view; figure 3, sectional bottom view of the machine.

Figures 4 and 5, detached views.

Claim.—The mode of stopping the piece and limiting the dimensions of the mortise; also the combination of an adjustable catch x, with a gauge n, having a recess r and screw s, for readily centering or adjusting to position the boring-tool.

No. 10,769.—FRANCIS ARNOLD.—*Improvement in the construction and combination of Foot-Stoves and Lanterns.*—Patented April 11, 1854.

The nature of this invention consists in the peculiar method of combining, for many practical purposes, a lamp-heating foot-stove and a lantern, constructed in such a manner that it will answer the purpose

of a foot-stove or a lantern, and convenient for heating or cooking any article placed upon its top.

In the accompanying figure, A represents the handle and grate when down as a foot-stove; B, a movable grate attached to the handle, to prevent the foot coming in contact with the top plate when used as a foot-stove; D the lid to be taken off for cooking purposes; E, glass panels.

Claim.—The movable grate attached to the handle, in combination with the foot-stove and lantern, constructed substantially as described, and for the purposes specified.

No. 10,770.—STEPHEN P. BROOKS.—*Improved iron-frame upright Piano-forte.*—Patented April 11, 1854.

The claims to novelty in this piano are for the construction of an upright instrument, in which the iron frame that receives the strings is curved or arched so as to prevent the breaking or springing of the iron frame by the strain of the strings, and so arranging the iron frame as to make it serve also for legs to support the main parts of the instrument.

Also, for placing the whole of the action below the level of the keys, giving the blow to the hammer, and then holding it after the blow is struck, by means of the triangular piece *k k*, and its notch *q*, operating with the rod *p*.

No. 10,771.—JULIO T. BUEL.—*Improved Attachments for Fish-hooks and Artificial Baits*—Patented April 11, 1854.

This invention relates to a device for preventing the points of fish-hooks catching in snags and weeds while trolling. It consists of a small spring rod C, which is attached loosely to a hook or artificial bait, and provided with a stay or support B, for it to rest and bear upon while sprung against the inner side of the point of the hook A. The spring, by reason of its elasticity, remains in connection with the point of the hook until it is struck by a fish, when it disconnects itself and allows the hook to perform its duty.

No. 10,772.—LEWIS S. CHICHESTER.—*Improvement in Dressing Flax and Hemp.*—Patented April 11, 1854.

The object of this invention is the production of a machine which will perform in succession, and at one continued operation, the actions of beating out the broken woody particles, and then scutching to clean out the tow; and for this purpose, two sets of blades or beaters are spirally formed, and the two sets revolve with equal velocities, but in opposite directions, and strike the fibres alternately on opposite sides, the spiral form causing the edges of the blades at the lower or feeding end to strike nearly at right-angles to the length of the fibre, to beat out the woody particles, and as the flax or hemp is driven towards the other end, gradually changing the direction of the blows, and increasing them until they perform the scutching operation by striking nearly in

the direction of the length of the fibres. The beaters are enclosed in a casing, with a slot in front to admit of feeding the machine, and the rear part is provided with a discharge-spout; the form of the casing, together with the spiral form of the blades, inducing a current of air from the scutching towards the discharge-spout at the beating end, so that as the flax or hemp is drawn towards the scutching end against the current of air, the dirt, woody particles, and impurities, are blown out through the discharge-spout.

In the accompanying drawing, *a* represents the frame, and *b b* two parallel shafts, geared together by two cog-wheels, so that they shall turn with equal velocities in opposite directions. Each shaft is provided with heads *d d*, to which are secured the spiral blades *e*. At the feeding end *f*, the edges of the beaters are rounded, and from thence towards the other end are gradually brought to an edge. In front there is a casing *h*, enclosing the beaters and having a feeding slot *i*, and at the back the beaters are enclosed in a casing *j*, with gutter *k*, and a discharge-spout *l*, at the back of the feeding end, for the escape of impurities. By reason of the twist given the blades and their inclination, when the material is introduced it is struck by the blades nearly or at right-angles to the fibres, and alternately on opposite sides; and as the bench is moved along towards the other end, the direction of the blow gradually changes until near the finishing end, where the blade strikes the fibres nearly in the direction of their length. The under surface of the blades at the feeding end is made nearly flat, and gradually assumes a curved form, so that during the scutching operation the ends of the materials will fly over and lie close to the curved face, thus enabling the scutchers to act with stronger force.

Claim.—The combination of the series of twisted or spiral and conical-shaped blades on the two rotating stocks, substantially as specified, which, by reason of the twist and conical shape, perform a beating action on the fibres at one end, and gradually change, until they perform a scutching action at the other end, as set forth.

Also, in combination with the rotating, twisted, and conical-shaped blades, the casing which surrounds them, with the discharge-pipe at one end, to confine and direct the current of air which is induced by the rotation of the twisted blades towards the discharge-spout, substantially as and for the purpose specified.

No. 10,773.—ALBERT G. CORLISS.—*Improved Swell-mute Attachment for Piano-fortes.*—Patented April 11, 1854.

The invention consists in the employment of clamps D D^1, so arranged within the instrument, and so controlled by the levers I, J, H, that the performer may at pleasure cause them to press upon both sides of the bridge, and hold it in such a manner as to control the vibration of the sounding board, and thus regulate the tone.

Figure 1 is a plan of the invention. Figure 2 is a sectional elevation.

No. 10.774.—JOHN ELGAR.—*Improved Hinge.*—Patented April 11, 1854.

The invention consists in making the joint a series of varied inclined planes or curves, which accelerate and retard the movements of the door in closing by its own weight.

Claim.—Making the joint of door or gate hinges a series of varied inclined planes or curves, which accelerate and retard the movement of the door or gate, in closing by its own weight.

No. 10,775.—RICHARD HENRY EMERSON.—*Improvement in Earth Cars.* Patented April 11, 1854.

The figure shows a section of the car.

The patentee disclaims hinged straps and mode of working them, also the levelling plate or scraper, as old.

Claim.—The construction of a long car, arranged as described, with two sets of doors in the bottom, of different breadths, which, in combination with the chains, axles, and crank-shafts, and the attached levelling plate V, enables to discharge and spread nearly one-half of the load without discharging the whole, and to equalize the quantities of earth dropped by discharging the different sets of doors, which could not be done if the doors were of equal width, and only one-half of them dropped at one time.

No. 10,776.—ALEXANDER HALL.—*Improvement in Piano-forte Actions.*—Patented April 11, 1854.

The patent is for a peculiar arrangement of the strings, bridges, and action of the piano-forte, by which the performer is enabled to introduce the upper octaves in addition to the normal notes while playing upon the instrument. In the construction of the instrument, in addition to the usual bridges a a^1 for the normal strings, extra bridges d d^1 are used to give to the octave strings their appropriate length; but one hammer-head is employed to strike each string and its accompanying octave; that part of the hammer-head b^1 which strikes the octave is made of a harder texture than the part b which strikes the normal strings; the action is made shifting by means of a movable key-board, pivoted at the point a^2.

Claim.—1st. The arrangement of the bridges of the upper octave strings in combination with the shifting action, so that the nodal points of these strings may coincide with those of the normal strings, in the manner set forth.

2d. The mode of shifting the action by pivoting the key-board, in combination with the employment of upper octave strings, in the manner set forth.

3d. Making the hammer-heads of hard and soft material, for the purpose of playing with effect upon the upper octave and normal strings with the same hammer-head.

No. 10,777.—STEPHEN USTICK.—*Improvement in Brick Machines.*—Patented April 18, 1854. Antedated November 15, 1853.

The main features of this machine are described as follows:

The mould-box *a* is made to slide freely on the ways A A, and works over a fixed piston *p* and a movable piston *e*. The latter piston derives its pressing force from a cam *m*, which revolves with, and is driven by, the vertical shaft *n*, and acts upon a friction-wheel g, and the piston is drawn back a little way after the pressure is completed by an adjustable cam *i*, revolving with the same shaft *n*, and acting on the friction-wheel g^1. The motions of the mould-box *a* are governed by cams *d d*, also revolving with the shaft *n*. The clay is fed into a hopper or receptacle c^1, immovably fixed to the ways A A. The mould-box is first thrust to the outer limit of its motion, in which position the perforation a^2 opens a free passage for the clay from the receptacle c^1 into the mould R, into which it passes and fills it, the capacity of R having been measured by the previous withdrawal of the piston *e* to a point determined by the adjustment of the cam *i*. The mould-box *a* is then drawn inward towards the centre of the machine, until R is entirely enclosed and cut off from c^1. The piston *e* then advances and makes the pressure, the mould-box being, however, at the same time made to move outward with half the velocity of *e*, at least in the last stages of the pressure, so that the two pistons *e* and *p* virtually have equal motions relatively to *a*, and the two sides of the brick are equally pressed. After this the mould-box is drawn still further inward until it leaves the pressed brick clear, and the latter on being relieved from the pressure of the piston drops upon a movable table *q*, ready at the proper moment to receive it. The mould-box next returns to its first position to receive another charge of clay, as above described.

The figures show only one half of the machine, the other half being exactly similar.

The patentee does not claim, in general, the combination of the reciprocating mould-boxes with the stationary and movable pistons, nor merely feeding the clay through the side of the mould-box at right angles to the line of motion of the piston, as these features exist in other machines.

Claim—1st. The arrangement, substantially as herein described, of the mould-box with the fixed and movable pistons, whereby, by its motion in the line of motion of the piston, it is made to perform the function of feeding the clay between the pistons, shutting it off from communication with the hopper, and discharging the brick.

2d. The apparatus for receiving and delivering the brick, consisting of the hand *q*, table *t*, and finger *x*, arranged and operated substantially as described.

3d. The arranging on the cam-wheel *a* the oil-boxes *u*, for lubricating and cleaning the faces of the pistons.

4th. The withdrawing the condensed air from the mould while the pressure is produced by a groove and scraper b^1, or other equivalent devices, substantially as hereinbefore set forth.

No. 10,778.—STEPHEN WATERMAN.—*Improved Circular Sawing Machine.*—Patented April 18, 1854.

The principal feature in this machine is the mechanical arrangements by which a log is cut into boards, scantling, &c., by means of a single circular saw, the shaft of which is hung in bearings that constitute a swinging frame moving round a stationary axis; the saw cutting half through the log from one side, and afterwards half through from the other side, thus effecting the division without the aid of a saw upon the stationary axis, as heretofore employed, in combination with such swinging saw.

Claim.—1st. Dividing the log by means of a single circular saw, whose shaft is hung in bearings in arms D D, which constitute a swing frame moving round a stationary axis; when such swinging frame is so arranged and operated, as herein described, that the saw is made to cut half through the log from one side, and afterwards half through it from the other side; and thus effect the division without the aid of a saw upon the stationary axis, as heretofore employed, in combination with such swinging saw.

2d. Raising the saw-shaft, by any mechanical means analogous to those described, to bring the collar and nut, or other device by which the saw is secured thereto, to a fixed position above the level of the plane of the top of the carriage, and close under the unsquared portion of the log during the cutting of the slabs from the log, so that the slabs may be cut from a much larger log than when the saw-shaft, or the collar and nut, or other device for securing the saw thereto, remains below the level of the plane of the top of the carriage.

3d. Controlling the tension of the driving belt J, so that it shall be tight when the saw-shaft is in position for cutting either above or below the log, but slack at other times, by means of the three guide rollers M M^1, N, of which the first two are hung on axes d d^1, in arms e e, e^1 e^1, secured firmly to the rock-shaft; and the latter is hung on an axis h^2, in swinging arms g g, which are held in proper position when the belt is tight, by contact with fixed arms h h^2, on the shaft; the whole operating as herein set forth.

4th. A dog U, of the lever-form described, attached below each or any of the slides V, by which the log is moved laterally, so that its tooth will project beyond the face of the said slide, and under the log, and controlled by a screw through the slide, by which its tooth may be forced upwards into the log when desired, as herein described.

No. 10,779.—MOSES T. ROWLANDS.—*Improvement in Tailors' Measures.*—Patented April 18, 1854.

This invention consists in securing several scales to the body of the person to be measured, with fixed points and pivots in the scales, which points and pivots form the points of imaginary base lines from which a series of triangulations are taken, which determine the dimensions of the body with great accuracy, so as to insure the garments to fit perfectly upon deformed as well as upon the most perfectly formed persons.

After the measure is taken, the scales are removed from the body and applied to the cloth, so as to repeat the triangulations taken upon the body upon the cloth, where, with the aid of a square and sector containing a series of scales adapted to the several parts of the garment to be cut, it is marked out with mathematical certainty, so that it may be made up at once; thereby saving the trouble, delay, and expense of basting the garment and trying it on the person by tailors who use the old system of measuring and cutting.

Claim.—The front side and back scales, or their equivalent, constructed substantially as described, and used in conjunction, for the purpose of taking the measure of persons, and cutting garments to fit them, substantially as described.

No. 10,780.—J. A. Roth and J. Lea.—*Improvement in Machines for Bleaching Flax.*—Patented April 18, 1854.

The improvement refers to an apparatus for bleaching the flax before its being manufactured into yarn or woven fabrics, and consists chiefly in combs, fig. 1, provided with hinged bars *d d*, to hold the flax firmly on the spikes *t t*, during the bleaching operation in frames, fig. 2, provided with recesses *m m* and spring clasps K, for the reception and ready removal of the combs aforesaid, and in an apparatus fixed on the top of the usual bleaching vats, fig. 3, by means of which the rollers, fixed alternately on the two frames R R^2 and L L^2, sliding one above the other, are made to change their respective distances from each other by working the rack-gear T *u*, thus admitting the introduction between them and into the vat filled with the bleaching preparation of the frames charged with flax, and squeezing the same flax while the frames charged therewith are lifted up from the vat.

Claim.—1st. To the employment of a series of combs for the purpose of sustaining the fibres, constructed and arranged in the manner substantially as herein described.

2d. To the flax or yarn frame and method of arranging the combs in combination therewith, substantially as hereinbefore described.

3d. To the combination of flax or yarn frame and vat, substantially as hereinbefore described.

No. 10,781.—Matthias P. Coons.—*Improvement in Iron Fences.*—Patented April 18, 1854.

This improvement consists in so combining a spring-bar B with the rails a^1, or their equivalents, of metallic fence, in the manner set forth in the specification, as to obviate the injurious effects resulting from too great a degree of contraction and expansion, arising from sudden changes of temperature. The drawings show a longitudinal elevation of the fence with the improvements, a side elevation of one of the posts, and a side view of the spring-bar.

Claim.—The spring-bar, in combination with the other parts of the fence, for the purpose specified.

No. 10,782 —THOMAS P. FORSYTH.—*Improvement in Machines for Winding and Folding Cloth.*—Patented April 18, 1854.

The object of this invention is to roll cloth or dry goods of any width, expeditiously and evenly; and also, to remove any creases in the article rolled by stretching it out before it is rolled.

The machine consists of a frame connected by cross-pieces; *b* is a flat table, over which the cloth is to pass on its way to the board on which it is to be stretched and wound. At either end of the table is a roller $g\,g^1$, designed to facilitate the passage of the goods; $c\,c^1$ are two slides, near the four ends of which a circular hole is made communicating with slits extending to the front end of the slides, to allow the shaft *s* to be passed to its place. The design of the slides $c\,c^1$ is to form a guide for the cloth to be wound, in order to keep the edges uniformly even; $j^1\,j^1$ are two guides, placed each immediately above one of the slides $c\,c^1$, and parallel thereto. The guides $j^1\,j^1$ are adjusted with slides to the width of the fabric to be rolled, and the ends of the guides $j^1\,j^1$, entering into the slots at either end of the table, serve to keep the article to be wound straight as it passes over the table to the winding shaft *s*. The stretcher to prevent creases consists of two strips *l l*, placed between the guides $j^1\,j^1$, so as to form an angle. A hinge connects the strips *l l*. The guides $j^1\,j^1$, being placed at the proper distance apart for the width of the article to be folded, by adjusting the slides $c\,c^1$, the stretcher *l l* is removed by drawing out the pins or loosening the hinge which fastens it to the guides $j^1\,j^1$; one fold of the cloth is then laid between the guides, and a thin stick is laid over it at the end of the guides; the cloth is then doubled over the stick, and another fold carried by hand back over the table *b*. The cloth is then doubled over the stick, and another fold carried back; a similar stick is then laid at the other end of the guides over the cloth, &c.

Claim.—The stretcher *l l*, in combination with the adjustable guides $j^1\,j^1$, and slides $c\,c^1$, and the winding shaft *s*, substantially in the manner described.

No. 10,783.—GARRET MELDRUM.—*Improved Turning-Lathe.*—Patented April 18, 1854.

This is a machine by which several pieces of wood, or other material, (intended each to have the like several curved and uniform sides,) may all, at the same operation, have one of their sides shaped uniformly to the same pattern; and each of the remaining sides may in succession have the same form imparted to it.

Claim.—1st. The chucks I, and pinions J, with their mandrels passing through the bosses in the chuck-plate E, in combination with the central spur wheel K, substantially and for the purpose as herein described.

2d. The pawls R, and their ratchet notches, in combination with the chucks I, substantially and for the purpose as herein described.

3d. The screw-bolt L, in combination with the excentric slot M, in the centre wheel R, and the indicator N with the regular divisions, or

their equivalents, marked on the wheel, substantially and for the purpose as herein described.

4th. The adjustable tail-rest plate S, having bosses to correspond with the corresponding bosses in the chuck-plate E, in combination with the screw mandrels and their jam-nuts T, the said tail-rest plate being adjustable on the main shaft F, substantially and for the purposes as herein described and illustrated.

No. 10,784.—Fowler M. Ray.—*Improvement in Spiral Springs for Railroad Cars.*—Patented April 18, 1854.

A flat spiral spring, between two conical surfaces. As the spring descends into the lower cone, support is given to part of its length, and the active spring shortened; the coils also bear against each other.

Figure 1 shows the spring at rest; figure 2 when in action.

The patentee disclaims the use of a flat spiral, irrespective of its peculiar action as set forth.

Claim.—The employment of a flat volute or coiled spring with the outer coil supported by the outer case, substantially as specified, when this is combined with the application of the weight or force to the inner and outer coils in lines parallel, or nearly so, with the axis of the spring, &c.

Also, the employment of one or more conical surfaces, or the equivalents thereof, as specified, in combination with the coiled spring, for the purpose of reducing the active length of the spring as the weight or force applied is increased.

No. 10,785.—John D. Seagrave.—*Improvement in Machines for Paring Apples.*—Patented April 18, 1854.

This invention consists of a wooden stand, which sustains the working part of the machine, to which a cog-wheel B, with a handle, is attached for turning the same, the teeth of which connect with an intermediate cog-wheel C, which connects with another one D, from the centre of which projects the fork E, which sustains the fruit to be pared. F is a movable sheath, capable of being pressed forward so as to cover the fork. In a groove in the outside of the sheath, a wire G is fastened to spiral spring H; when the spiral spring is at rest, the sheath is drawn back so that the fork remains uncovered for the fruit to be placed on it. Teeth on the cog-wheel B also connect with a cogged semi-circle J, in which is placed a projecting pin K long enough to strike and turn the wire G when it is reached in the revolution of the wheel J. The semi-circle of cogs J is connected with L, a half gear with cog teeth, from which an arm M projects, forming a part of this half gear, and in M there is a slit for the play of the knife-handle. The half gear is fastened to a wire axis, which rotates through holes in two uprights N and O in the stand. A wire is coiled around part of this axis, between N and O, so as to keep the half gear, when not turned by the action of the cog-wheels, close to the cog-wheel at the semicircle of cogs J. The knife P is placed at the end of

another wire Q which plays through the slit in M, the arm attached to the half gear L. This wire Q is fastened to the axis by a hinge at its extremity S.

The patentee does not claim in general the device of combining with a paring machine, in which the paring-knife moves automatically over the apple, a sliding piece moved automatically in regular alternation with the movement of the knife, in such manner as to push the apple from the fork at the completion of the paring, because such device has been used before in the apple-parer of Charles P. Carter, patented October 16, 1849.

Claim.—The specific mechanical arrangement invented for said device, viz: the sheath F, made to slide upon the spindle or axis of the fork, and operated by the wire G, which is impelled, at the proper moment, by the pin K on the wheel J, substantially as herein set forth.

No. 10,786.—G. B. Dixwell and J. A. Dorr.—*Improvement in Gas Regulators.*—Patented April 18, 1854.

The improvement is intended to prevent the inconveniences experienced in the use of gas regulators, resulting from the disturbances created by the varying pressure in the main; by disconnecting from the regulating gasometer the surface which is interposed between the main and the branch, contrary to the course pursued heretofore, where, as for instance in Clegg's regulator, surface V was connected with the regulating gasometer G, and therefore exposed the latter to all the disturbances to which it was exposed itself. The drawing illustrates one of the forms in which the principle may be developed. The surface V appears here supported on an adjustable standard S, and disconnected from the regulating gasometer G. The pressure of the gas in the main, however irregular, cannot disturb the gasometer; this pressure not acting directly on it through V, but through the means of the intervening inlet pipe H, which, being connected by braces *c c* and rod R with gasometer G, can only rise or fall vertically in proportion to the pressure in the main, and thus approach or recede from the diaphragm E, so as to close or open the aperture *a*, but never can be disturbed in any lateral direction.

Claim.—An improvement on the forms of gas regulators herein before described as Clegg's and other similar gas regulators, by disconnecting from the regulating gasometer thereof the surface which is interposed between the main and the branch, and upon which the disturbing pressure of the gas in the main operates, and which in those regulators is connected with the regulating gasometer, and connecting the regulating gasometer with a tube or its equivalent apparatus, which is not disturbed by the varying pressure of the gas in the main, substantially as herein described.

No. 10,787.—GEORGE AULICK.—*Improvement in Car Couplings.*—Patented April 18, 1854.

Claim.—Constructing a metallic box with vertical grooves *s s*, and an inclined trough or slide chamber *g g*, and using in combination therewith a vertically operating valve-like catch *c c*, formed with a convex or oval side, and a bevel-like flap on projection *a*, together with a gravitating or self-acting bolt or sliding latch *f*, specifically as described.

No. 10,788.—ARI DAVIS.—*Improved Box Machine.*—Patented April 18, 1854.

This improvement consists rather in the mode of securing the corners of boxes, than in the machinery by which the material is prepared for being thus secured, though both the machine and the article manufactured are included in the patent.

Figure 1 presents a front elevation of the machine.

Figure 2 shows the form of the piece of metal for securing the corners.

Figure 3 is a perspective view of the finished box.

Scores are made in the ends of the boards by the circular saws *e* and *f*, which are hung, one perpendicular to the surface of the board to be scored, and the other at an angle of 45° to the plane of its surface. Pieces of metal are bent to the proper shape for insertion in the scores, and the box is then put together.

Claim.—The corner fastened in the manner described, by forming a mitre joint and scoring the outside of the box in the manner described, and fastening the two parts at the corner by the angles of metal, as herein specified, without the use of nails or screws therefor. Also the combination of saws and cutters for forming the joint, as above described.

No. 10,789.—SAMUEL T. FIELD.—*Improved Apparatus for Painting Window Blinds, &c.*—Patented April 18, 1854.

The blinds having been dipped in the trough H, containing the paint, are taken out, and then placed one each side of the shaft C, with one still resting in one set of notches of the clamps. The loose clamps are then tightened upon them, and the lid of the cylinder B^1 being closed, rotary motion is given to the driving pulley, which communicates it to the shaft C and disks D D, causing the blinds to be whirled rapidly within the cylinder, and all the superfluous paint is driven off. The revolution may then be stopped, and the blinds taken out and touched up with a brush at the parts where the clamps have been in contact with them.

No. 10,790.—JAMES L. CATHCART.—*Mode of Attaching Propellers.*—Patented April 18, 1854.

This invention consists in placing the universal joint of the propeller shaft between the stern-post and the rudder.

Claim.—Attaching the propeller, secured to a short shaft which passes through the rudder to its main or driving shaft by a universal joint placed between the stern-post and the rudder, by which attachment the propeller is moved laterally with the movement of the rudder.

No. 10,791.—G. M. CONNER.—*Improved Water-Wheel*—Patented April 18, 1854.

This improvement consists in the means employed for enlarging and contracting the vent or discharge orifice, whereby said vent or discharge orifice may at all times be of such capacity as to correspond to the inlet orifice, or to the distance the gate is opened; thus avoiding the loss of power occasioned by any back action of the water upon the buckets, and at the same time obtaining the full effect of all the water which enters the scroll upon the buckets.

The drawing presents a view of the under side of the wheel, showing the device by which the discharge orifice is enlarged or contracted. In these drawings A represents the scroll, J the gate or inlet orifice, D the discharge orifice, which is at the centre of the bottom plate of the scroll, indicated by E.

Claim.—Enlarging and contracting the vent or discharge orifice D, so as to correspond to the inlet passage, by means of the ring formed of three sections *d*, *e*, *f*, attached to each other as shown, and connected to the crank arm *p* of the gate J by the lever I, as herein set forth.

No. 10,792.—GEORGE W. LA BAW.—*Machine for Cleaning Blinds, &c.* Patented April 18, 1854.

This machine is designed for cleaning and rendering smooth and uniform the entire surface of doors, shutters, blinds, and panel-work generally, after it has been put together; which process is now performed by hand, with much labor and a great expenditure of time.

The machine is supplied with knives or cutters, sufficiently long to reach the entire width of the door, or other object to be finished; and these are followed by a sanded cylinder of the same length, that revolves rapidly and smooths the work.

The figure shows the carriage, feeding, and reversing gearing; also, the cutters and the sanded cylinder.

Claim.—This machine as original; and the application of it for cleaning doors, blinds, shutters, and panel-work generally.

No. 10,793.—WILLIAM BOGGETT and GEORGE B. PETTIT.—*Improvements in Heating, Warming, and Cooking.*—Patented April 18, 1854. Patented in England, October 22, 1851.

This invention consists in applying the combustion of gas to the purposes of heating and cooking. The method pursued is directly the reverse of that heretofore followed in the combustion of gas for light and heat. The upward current of air produced by the rarefying in-

fluence of the heat is caused to oppose the discharge of the gas, and to force the air to impinge as much as practicable against the gas at the point of discharge, or, by checking the upward movement of the gas, cause it to press laterally, and thus avoid the precipitation of unconsumed carbon; thereby preventing smoke, and at the same time heating the air and the vessel through which the gas passes to the point of ignition. The burners used to effect these objects consist of a hollow ball, perforated on its under side for the purpose of allowing the gas to issue therefrom, and commingle with the oxygen of the atmosphere. The gas, during ignition, will envelope the ball and make it red-hot, causing it to give out an intense heat in addition to the heat of the flame. Any number of these burners may be used by securing them on lateral supply-pipes, as in the figure.

Claim.—Making gas-burners for heating and cooking purposes, with minute apertures from an inverted or inclined surface or surfaces, substantially as herein described, so that the upward current or currents of atmospheric air shall be made to impinge and act on the issuing gas at the point or points of issue, on the principle and for the purpose specified.

Also, combining with burners, constructed and operated on the principle specified, a chamber through which the gas shall pass to supply the issues, and so located that the flame shall impinge against the surface thereof, for the purpose and in the manner set forth.

No. 10,794.—CHARLES DE SAXE, assignor to THOMAS H. BATE.—*Improved Landing-Net for Anglers.*—Patented April 18, 1854.

This invention is for making the hoop or mouth of the net with joints or hinges, that the hoop may be folded up in a small compass, and thus be rendered more convenient, while, at the same time, its strength is not diminished. The arrangement will be readily understood on reference to the figures. Fig. 1 represents the net open and ready for use; fig. 2 represents it closed.

No. 10,795.—CHARLES DE SAXE, assignor to THOMAS H. BATE.—*Improvement in Fishing-rods and Floats.*—Patented April 18, 1854.

The nature of the invention consists in inserting in, and combining with the rod, a secure and convenient box for carrying various implements of fishing tackle, and in constructing a float so that a very slight bite or nibble will spring the hook and secure the fish.

The cavity in the rod, which holds the box, is represented at A. The float is constructed with a cavity, containing a helical spring D, surrounding a standard *d*, attached to a lever E, which, by means of a hook *h*, is held to a catch *g*, when set for use; a pull at the line *e* disengages the hook *h*, and the lever E immediately flies up and the fish is secured.

Claim.—The combination of the tackle-safe with the rod, so that the whole forms but a single article, compact, safe, and convenient; also, the peculiar construction of the float, by which the slightest touch at or

interference with the hook causes the line to be suddenly moved or jerked, as if by a quick motion of the hand, and the fish to be thereby hooked, and whether the float is used with the combination before set forth or separately therefrom.

No. 10,796.—J. H. FAIRCHILD and SYLVANUS RICHARDSON.—*Improvement in Potato-washing Machines.*—Patented April 18, 1854.

The machine is constructed of a slatted cylinder C, within a close or tight cylinder B, the space *e e* intervening between and containing a spiral partition E, running from end to end. The potatoes or roots are placed in the slatted cylinder C, with the proper supply of water, and the cylinder is rotated in an inclined position. The dirt passes into the space *e e*, and from this, guided by spiral E, to the outlet *f*, and by the effect of the centrifugal power generated through the revolution, while the clean roots are discharged at *c*.

Claim.—The manner herein described of constructing the machine with an outer solid revolving cylinder B, for containing water and catching the dirt removed from the roots, and with an inner slatted cylinder, which is secured fast to the outer cylinder, and revolves with it, for removing the dirt and foreign matter from the roots, and discharging them in a clean state at one end of the machine, in combination with the spiral or screw-thread, placed in a spiral manner between the two cylinders, for the purpose of separating the dirt from the washed roots, and effecting its discharge simultaneously with the discharge of the roots at the opposite end of the machine, through the passage *f*, substantially as herein fully set forth and specified.

No. 10,797.—THOMAS ARMITAGE.—*Improved Portable Ladder, or Fire-Escape.*—Patented April 18, 1854.

This is an extension ladder, which may be folded up within a very small compass, and, in case of fire, may be rapidly extended, so as to afford a safe and reliable means of escape from the upper rooms of edifices.

Claim.—Constructing an extension rescue, or ladder, by means of a series of knee-shaped pieces, and a series of rungs of unequal and graduated lengths, combined and operated in the manner described.

No. 10,798.—PHILOS BLAKE.—*Oyster-Knife.*—Patented April 18, 1854.

The improvement consists in combining with the oyster-knife two lips. C and D, secured to the shank, near the heel of the blade B, between which lips the nose or thin end of the oyster may be inserted, and, by a twisting motion, broken off, in order to present an opening for the blade.

Claim—to the combination of the cheeks or lips with the knife in one instrument, whereby the opening of oysters is accomplished with greater ease and expedition.

No. 10,799.—JAMES BALLARD.—*Improved Slitting-Gauges.*—Patented April 18, 1854.

This invention relates to a new and ingenious method of preventing the slitting-gauge used by carpenters, cabinet-makers, and others, from running off the board, or cutting in the direction of the grain of the wood, and thereby spoiling the article to be operated upon. It also relates to a new and useful method of securing the cutter in the stock of the gauge; and likewise of securing the head to the arm, or bar, on which it slides; and further, to a new arrangement of the friction rollers, for taking off the friction from the face and bottom of the gauge, in moving from one end of the board to the other.

Figure 1 is a perspective view of one of the gauges, with the improvements applied to it, and in operation.

Figure 2 is an inverted plan of the same, showing the arrangement of the rollers, and the two positions which the gauges are capable of assuming—figure 2 representing one position, and figure 3 the other—the one when cutting with the grain, and the other when cutting against it. A A^1 represents the gauge-head in two parts, united by the fulcrum-pin B; C the arm passing through the head on which it slides; D D^1 are the back stops attached to the upper section of the head; E E^1 are the set screws for regulating the set of the upper section of the head; F G are eccentric levers for locking the slitting cutter and gauge-head in their places; H I J are the friction rollers; L is the centre stock, in which is inserted the cutter.

Claim.—The slitting gauge-head, made in two sections, with or without friction rollers, when said sections are united together at the centre of their length, by a pin B, or its equivalent, substantially as and for the purpose herein described. Likewise the arrangement of the friction rollers H, I, J, for the purpose herein described.

No. 10,800.—R. M. BOUTON.—*Improved Faucet.*—Patented April 18, 1854.

The figure represents a perpendicular, longitudinal section through the axis of the water-way *w*, showing the internal structure. In this figure, S is the shank, V the valve, P P^1 the piston or valve porter, R the adjusting screw, C the cam, L its lever, O the outlet or mouth, F the fulcrum or centre pin of the cam, and M the cam-mortise in the faucet and piston.

Claim.—The combination of the piston, cam, and lever, substantially as described and represented, with or without the toggle-joint, for the purpose of closing the valves of liquor faucets.

No. 10,801.—DAVID and SAMUEL FLANDERS.—*Improved Fly Trap.*—Patented April 18, 1854.

This trap has a horizontal, circular, rotating disk B, divided on its upper surface by four upright ledges into sections *b b b b*, which, as the disk rotates, pass in succession underneath a portion of a circular cover, or top, of a box C, which contains a wiper D that sweeps the interior

of the sections *b*, and throws the flies into the box behind the wiper, from which they fall into a glass of water represented at I. The sections *b* are suitably baited to attract flies, and the apparatus is moved by suitable clock-work, to insure a steady and equal motion of the disk and wiper.

No. 10,802.—MARTIN HALLENBECK.—*Improvement in Grass-Harvesters.*—Patented April 18, 1854.

The improvement and claim is confined to the peculiar construction of the fingers *d*, having ribs K at their lower part, and vertical slots *l l* passing through them on each side of the ribs, with inclined plates *j* attached to them, and ledges *h* at each side. The plates *j* prevent the sickle from clogging, and the ledges *h* prevent the grass from being thrown out from the fingers by the action of the teeth.

No. 10,803.—JULIUS C. HURD.—*Improvement in cleaning Cotton and other Fibrous Substances.*—Patented April 18, 1854.

This machine is used for picking, seeding, and cleaning either wool or cotton, as well as for picking and reducing to threads fabrics made of wool, flax, cotton, silk, hemp, or jute, or any fabric composed of coarse thread, so that the same may be again carded and spun. Hot air is also introduced into the machine, by which a greater uniformity of the numbers of the yarn is obtained, and the material is better cleansed.

The figure represents a longitudinal section of the machine. The teeth of the combing-beater D are curved, so that if their surfaces were produced, a cylinder would be formed concentric with the cylinder to which the teeth are attached. A grating, *b*, is applied immediately under the combing-beater, each slat of the grating being furnished with independent springs, whereby the motes, as they fall upon the grating, are instantly knocked through the spaces between the slats, the latter yielding to permit the impurities to pass between them.

Claim.—The use of the peculiar combing beater herein described; the teeth being so curved as to bring the beater very near the feed-rollers, and united with each other at their bases in the manner of saw-teeth, for the purpose set forth.

Also, the peculiar method, herein described, of applying springs to the slats of the grating beneath the beaters, each slat being furnished with independent springs, whereby the motes, as they fall upon the grating, are instantly knocked through the spaces beneath the slats, and are not carried round by the beater to be again entangled with the material—the slats yielding to permit the impurities to pass between them.

Also, the introduction of heated air into machines for picking and dusting cotton, by which a greater uniformity of the numbers of the yarn is obtained, and the material is more thoroughly and readily cleansed.

No. 10,804.—DAVID A. HOPKINS.—*Improved Ticket-box for Railroad Cars.*—Patented April 18, 1854.

A ticket-box is provided for every car-seat, and the original tickets, which stand in account against the conductors, are taken from the boxes by agents at the end of the line; the agents being provided with keys.

Each passenger is to be provided with two tickets, an original and a duplicate; upon taking a seat, the occupant places his original ticket in the space between the back plate *e*, and the glass *c*, and gives the duplicate ticket to the conductor previous to leaving the train. As way-passengers leave the train, and others occupy their seats, the tickets are kept in the order of placement, and so held by a spring *i*.

No. 10,805.—ABRAM C. JOHNSON.—*Improvement in Operating Dumping-Cars.*—Patented April 18, 1854.

The car has its front wheels with the flange on the inside, and the hind wheels with the flange on the outside. On reaching the dumping place, the front wheels run down the rail O, and the hind wheels up the rail M, and the load is discharged. On returning, the empty car is passed over the balance beams A, while the loaded car is stopped beneath it.

The patentee disclaims operating by endless chain, or mere double tracks, one above the other.

Claim.—The construction of the balance-beams arranged as described, for the purpose of passing one set of cars over another set, running in an opposite direction on the same track.

Also, the arrangement of the rails M M and O O, in combination with that of the car-wheels, as described, for the purpose of rendering the cars self-dumping.

No. 10,806.—LAWSON P. REACH.—*Improvement in Cooking.*—Patented April 18, 1854.

The claim explains the nature and operation of this invention.

Claim.—The method herein described of roasting oysters, or other articles of food having a shell or similar natural covering, by arranging the oysters on supports at a suitable distance apart for the play of the flame of gas, issuing from gas-pipes, or burners, on or against their shells, when the said burners are so arranged that the flame of the one burner, jetting horizontally, or slightly dipping from the horizontal position, impinges and acts upon the top-shell of one oyster and the bottom-shell of another, as herein set forth, whereby the fish is more thoroughly cooked, and one burner serves for two oysters, as specified.

No. 10,807.—GEORGE W. KELLER.—*Improved Fire-Escape.*—Patented April 18, 1854.

A roller A is fixed in suitable bearings attached to the inside of buildings, opposite a window; on the roller is wound a double chain

D D, united by rungs *c c*, to which are also fastened guard pieces F, of the form shown in the drawing. On the occurrence of a fire, it is intended that a few of the outer links of the chains shall be unwound from the roller A, and thrown out of the window; when, by aid of the weight W, it is expected that the whole safety-contrivance will be carried to the ground, and persons may descend inside of the guards F in safety. E are friction-rollers to insure the descent of the ladder.

No. 10,808.—J. Augustus Roth and Joseph Lea.—*Improvement in Process for Bleaching Flax.*—Patented April 18, 1854.

This process is entirely mechanical, being a vertical agitation by power, and, at the same time, a drawing through squeezing-rollers. The flax or yarn is, for the purpose, hung on combs, so as to pass the teeth through the middle of the hank, or skein, in order to immerse the fibre simultaneously in the bleaching solution.

Claim.—The process of distributing the flax-fibre, or yarn, upon combs, or equivalent devices, and agitating the same when immersed in chemical bleaching solutions, in the manner and for the purposes substantially as hereinbefore described.

No. 10,809.—Anthony Sohn.—*Improved Machine for Filling Match-Frames.*—Patented April 18, 1854.

The design of this improvement is to overcome the necessity for mere manual labor, in placing match-splints in a position to receive the sulphur or other igniting compound required to be placed upon them.

Claims.—1st. The combination of the bottomless, shaking, or reciprocating-box or hopper C and the fixed bed B, which is grooved transversely to the motion of the box, but longitudinally to the direction of the matches, substantially as described, for the purpose of separating a number of matches, and laying them parallel in a row at a required distance apart.

2d. The reciprocating series of rods O O in combination, as described, with the grooved bed B, for the purpose of pushing the matches longitudinally from the grooves into the frame P.

3d. Placing the match-frame P, for the purpose of being filled, in an upright fixed frame, M M O, which is furnished with a sliding, balanced cross-piece N, containing a moveable step R, which is capable of being protruded through the said cross-piece between the sides of the match-frames, and withdrawn therefrom for the purpose of receiving the slats K K and the matches nearly on a level with the grooved bed, and lowering them into the match-frames until the latter are full, and then being withdrawn therefrom, to leave the matches in the frames, and leave the frames free to be taken from the machine, substantially as described.

No. 10,810.—WILLIAM H. TOWERS.—*Improved Machine for Opening Oysters.*—Patented April 18, 1854.

The improvement consists in tightly embracing the oyster to be opened between jointed metallic jaws, made to resemble somewhat the convex sides of the oyster, and forcing and guiding the knife between its shell in such a manner as to divide them, and at the same time cut the eye of the oyster. In operating with the machine, the upper edge of the oyster is first broken off to allow the edge of the knife to enter; it is then clamped between the jaws A A and the knife K set in the proper position, when, by closing the jaws by means of the strap G, the oyster is firmly held, while the lever L is depressed, and the oyster is thus forced open.

Claim.—To the method of opening oysters and other bivalves without injuring the hands, by firmly enclosing them between jaws, and forcing a knife, having spring-guides on its sides, of the form described, between the shells, in the manner herein set forth.

No. 10,811.—WILLIAM LAPHAM, *executor of* SENECA LAPHAM, *deceased.*—*Improvement in Maize-Harvesters.*—Patented April 25, 1854.

The invention is confined to the arrangement of the reel T, the arms U U and W W, which receive the cut maize and deposite it in bundles on the ground by an intermitting rotation created through spring stops W V, worked by the movement of a cam or pin Q on the driving-wheel P, and the lever R vibrated by said pin. The maize, when cut by the cutting-arrangement, which is of ordinary form, falls by its own weight on the reel-arm.

Claim.—Is restricted to the method of arranging and operating the reel; that is, hanging the reel on a frame working vertically in ways, and supplied with suitable stops for receiving and discharging, at intervals, the cut maize, substantially as set forth.

No. 10,812.—JOSIAH ELLS.—*Improvement in Revolving-breech Fire-arms.* Patented April 25, 1854.

This invention consists in the extension G, on the forepart of the rotating-chambered breech, as a prevention of the fouling of the spindle by the smoke in firing; and also as a means of connecting and locking the breech with the barrel, as herein set forth. Also, in the mode of connecting and locking the barrel and breech to the lock by means of a bracket and spring extending in front of the lock-plate, as described, marked *m n.*

Claim.—The extension on the forepart of the rotating-chambered breech, as a prevention of the fouling of the spindle by the smoke in firing, and also as a means of connecting and locking the breech with the barrel, as herein set forth. Also, the connecting and locking the barrel and breech to the lock, by means of a bracket and spring, extending in front of the lock-plate, in the manner described.

No. 10,813.—James R. Stafford.—*Improvement in Distilling and Condensing Apparatus.*—Patented April 25, 1854.

The improvement refers to the separation of oils of different volatility, being the products of the destructive distillation of rosin, bitumen, asphaltum, residuums of gas-works, fats vegetable and animal, &c., by means of a condenser either surrounded by a jacket, or having a pipe or pipes passing through it, into which air or steam is admitted and allowed to escape at the pleasure of the operator, who is thus enabled to control, at every movement, the temperature of the condenser, agreeably to the quality of the material distilled, and to the degree of volatility of the different oils to be separated.

Claim.—The employment, for the purpose of separating the more and less volatile products of distillation, of a vessel B, which has an opening E for the escape or withdrawal of condensed matters; and another opening F for the escape of the more volatile matters, and which has its temperature regulated by the admission of steam or air through a pipe J passing through its interior, or through a chamber D surrounding it, substantially as set forth.

No. 10,814.—A. Harvey and C. Guild.—*Improvement in Vinous Fermenting Close Vessels.*—Patented April 25, 1854.

The improvement consists in the addition to usual range of closed fermenting vats, as patented, for instance, to C. O. Walpers, in July, 1841, of sundry devices, having for their object the return into, and the disseminating through, the fermenting liquids of the gases evolved by fermentation, in order thereby to condense, retain, and re-imbody in the liquid the alcoholic vapor thrown off, in conjunction with the carbonic acid gas, during the process of fermentation; and also, by returning the carbonic acid gas, to accelerate and render more perfect the decomposition of matter made subject to vinous fermentation by the chemical action of the carbonic acid gas thereupon.

Claims.—1st. The application of pumps *i*, or of exhausters and blowers, or other equivalent apparatus, to draw the gas from one fermenting vat, and force it into the fermenting liquid in another or the same vat, as herein described.

2d. The arrangement of apparatus whereby a return current is created, and the circulation of the gases caused; that is to say, the return pipe *c* and pumps *f*, or mechanism substantially equivalent, as set forth.

3d. The check-valve *h* in the disseminating pipes, for the purpose of preventing any contrary passage of the liquid from vat to vat from that which was intended, in combination with the turn-off cocks, for the purpose of isolating a portion of the vats, and shortening the circuit when desired; and the whole in combination with the pumps or valved pistons for the acceleration of the circulation, and by this means equalizing its action, and removing the danger of bursting the vats.

4th. The pipe b^4, having two discharge nozzles, at different heights of the liquid of the condensing vat, and cocks in the upper nozzle, in order to regulate the amount of vent or discharge.

No. 10,815.—Joseph C. Tiffany.—*Improved Ditching Plough.*—Patented April 25, 1854.

This invention and claim consists in the combination of one or more adjustable coulters *o o* with a permanent coulter M, and with adjustable elevators N, with mould-boards attached, so that the width of the ditch may be varied, and the elevators be set to suit the depth of the ditch intended; also in still further combining with these a flexible spreader, attached to the rear of the plough, which may be so adjusted as to remove the earth taken out in forming the ditch to the required distance from the edge of the ditch.

No. 10,816.—George W. Glass.—*Improvement in Cast-Iron Car-Wheels.*—Patented April 25, 1854.

Braces of various forms are to be cast on the surface.

Claim.—The constructing of cast-iron car-wheels of the shape and conformation described in the specification and shown in the accompanying drawings, being wheels with two disks, united at the rim and tread, and at the hub, by a series of circular or semi-elliptical arches; the greatest external curvature of the inner disk being immediately under the flange, and below the point of contact of the flange and tread, for the better supporting the flange and tread, in combination with the braces of the construction and shapes shown in the drawing.

No. 10,817.—Frederick Field.—*Improvement in Travelling Bridges.*—Patented April 25, 1854.

This is a bridge long enough to extend over three piers, and carries the load with it. The action of the locomotive upon the wheels D, or any other means of propulsion, may be used.

Claim.—The patentee does not claim a retractile drawbridge, nor any of the appliances by which such bridges are moved, but wishes it to be understood that he distinguishes his bridge from all others, and claims it as such. That this bridge acts as a carriage as well as a bridge, receiving its load upon it while resting on the abutments, or one side of the span or spans to be crossed, carries the load over, and rests upon the other side to receive its return load; and so back and forth, leaving the spaces between the piers open for vessels &c.

No. 10,818.—William E. Milligan.—*Improvement in Railroad Car Seats.*—Patented April 25, 1854.

This seat is adapted for use of a carriage or railroad car, or as a conversational sofa, and so arranged as to be readily reversed as occasion may require, the peculiar device consisting in ways which support the angle of the seat and back, whereby it is transferred from the front to rear of the chair, when the reversal is made. The patentee does not claim the device of making reversible seats, in which the back

turns down to form the seat, and *vice versa*, such having been before used.

Claim.—Supporting the angle of the seat and back upon ways, or in any equivalent manner, whereby it is transferred from one side of the chair-frame to the other, in making the reversal, substantially as herein described.

No. 10,819.—JOHN P. AVERY.—*Improved Method of Securing Stones in Foundations.*—Patented April 25, 1854.

The substance of this invention consists in the combination and arrangement of the dovetailed flanged joggles D D and the key *c*, by which two stones in the same course and one in the next immediately above are at once clamped together by driving in the key *c*.

No. 10,820.—THOMAS W. BROWN.—*Improved File or Bill Holder.*—Patented April 25, 1854.

In the drawing, A B represents two flat boards of equal size. In the upper board A a circular recess C is made, to receive a ring or hollow barrel D, containing a coiled spring E, sustained in place by a pin F. Four cords, G H I K, are wound in the hollow periphery of the barrel D, and their outer ends attached to the board B, thus binding the two boards between which the papers are arranged with elastic supports.

Claim—to the arrangement or application of the circular-grooved annulus or spiral-spring and the cords together, and with respect to the two boards, in manner and so as to operate substantially as hereinbefore specified.

No. 10,821.—CHARLES BUSS.—*Improvement in Repeating Fire-Arms.*—Patented April 25, 1854.

The substance of this invention and claim consists in the combination and arrangement of the parts by which the trigger-guard H performs the double functions of protecting the trigger and serving as a spring to press the index-holder against the catch-wheel, as specified.

No. 10,822.—REUBEN BURDINE.—*Improved Rotary Pump.*—Patented April 25, 1854.

The drawings present, figure 1, a central sectional view of the apparatus, with the driver in its place; and figure 2, a view of the driver with one of its sides removed. This machine is so constructed as to require neither packing nor close fitting in any part of it, depending entirely on water packing; from which circumstance much of the friction, incident to other machines for similar purposes, is avoided. A represents the driving shaft; B, the casing, which consists of flat disks of metal, having a raised rim or flange *e e*, thus forming a drum; *c c* are semi-circular bridles, which serve as journals for the shaft A; *a a a a*

are raised borders, circumscribing the openings of each side of the disks or inlets for the water; D is the discharge-pipe; *b b b b* are annular rings bordering the screws *d d d d*, that are secured on the shaft A; *f f f f* represents the sides of the driver united with the screws and shaft; E E E E are parts of a circle interposed as vanes between the sides or plates of the driver, for the purpose of partially contracting the space at the periphery.

Claim.—The combination of the screw, or screws, upon the rotary shaft A, with the radial curved wings or drivers E E, [though the patentee does not confine himself to the curved form, as straight ones may be used,] the whole contained within a case or drum for receiving and directing the water intended to be elevated in the manner set forth.

No. 10,823.—STEPHEN and JAMES A. BAZIN.—*Improvement in Machinery for Laying Rope.*—Patented April 25, 1854.

The nature of this invention consists in an arrangement of mechanical devices by which an extra twist can be given to the strands when desirable, so that the machine can be readily adapted for forming either "soft" or "hard" cordage, as it is termed; and also in the use of a bent crane with a hinged bar, which moves parallel with the axis of the reel-shaft, in lieu of a straight one, for forming the rope into coils, as the end of the straight crane, over which the cord passes, describes an arc of a circle, which practically prevents the coil from being perfectly formed. There is also an improvement by which the rope is stretched after it is formed, and before it is wound into a coil. In the figure, *a a a* represent the bobbins hung in the swinging frames *b b b*, which have their journals in the plate *c*, and are revolved by the shaft *e e*. The short cranks *f f*, which are attached to the ends of the journals of the swinging frame, have their journals in a plate *g*, which revolves upon the rollers *h h*, which have their bearings in a plate *i*, (attached to the pulley *k*,) the hollow shaft *l* of which fits over an extension of the shaft *e*. Motion is communicated to the shaft *e*; and when but one twist is to be given to the strands the plate *i*, with its roller, is prevented from revolving, so that the ring *g g* will turn in one fixed circle of revolution around the rollers *h h*, (held in one fixed position,) and keep the bobbins *a a* in a vertical position as they revolve around the shaft *e e*. When an additional twist is to be given, the swinging frames are made to turn upon their axes while revolving around the shaft, giving an extra twist to the strands by causing the ring *g g* to revolve excentrically around the shaft *e e*. This is effected by means of the plate *i*, to which the rollers *h* are attached, to which motion is communicated by means of a band *n* extending around its pulley *k*, the pulley *o*, fixed to the shaft *e*, and the grooved pulleys *p p*. The pulleys *p* revolve loosely on the shafts, so that by lifting one of these pulleys from its shaft the band *n* will be loosened, and no motion will be communicated to the plate *i*. The rope, after being laid, is drawn along by a system of gearing, and passes first around the pulleys *r* and *s*, and thence around a pulley *t*, forming a part of the pulley *r*. The pulley *t* is larger than *s*, which arrangement will give a strain to the

rope. The crane consists of a straight bar *w*, hinged to a standard *y*, and attached to a bent arm w^1. To the latter is attached an arm *x*, turning on a pivot at y^1. The arm *x* extends over the reel *z*, parallel with its axis, so that as the reel *z* revolves, the rope will be drawn over the pulleys of the crane and fed along as the helical curves of the coil are formed in a line parallel with the axis of the reel, thus forming a regular coil.

Claim.—Adapting the machinery for forming both "hard" and "soft" cordage by means of the ring *g*, so actuated by the circular plate *i*, and its rollers, made to revolve or held stationary, as set forth, as to form an extra twist in the rope, by giving an additional revolution to the bobbin frames.

Also, the moveable crane, formed of a bent shape with the right-angular hinged arm, operating so as to feed the rope in a direction parallel with the axis of the reel.

Also, stretching the rope after it is laid, by means of the double pulley *r t*, with grooves of different diameters.

No. 10,824.—Henry Clark.—*Improved Machine for Feeding Sheets of Paper to Printing Presses.*—Patented April 25, 1854.

The invention consists in detaching or loosening the sheet of paper that is to be fed to the press from the sheets underneath it, by giving the sheet a backward and forward motion, previously to its being operated upon by the feed or pressure rollers.

The paper *b* being laid on the box A, and its front edges placed under the lips *o o*, motion is communicated to the shaft B, and the wiper K acts against a frame, and the pressure blocks I force backward the front part of the top sheet of paper from underneath the lips *o o;* the pressure bar E bearing firmly upon the paper, owing to the spring G^1, and causing the upper sheets to be bent upwards, angularly, between the pressure bar and the pressure blocks. When the frame is freed from the wiper K, it moves back to its original position, by means of the spring J; and the pressure blocks, in their return motion, bring the top sheet of paper forward over the lips *o o*. The cam G then raises the pressure bar E; and the spring segments D D then bear upon the paper and force it forward a short distance; and then the elastic strips *d d* bear upon the paper, and move it along the required distance, to be fed into the printing press.

No. 10,825.—George H. Cottam.—*Improvement in Portable Folding Chair Bedsteads.*—Patented April 18, 1854. Patented in England October, 5, 1852.

This invention consists in combining three frames (either stuffed or not) by hinges or joints, so that they fold together, and form at one moment a chair or a sofa; one of the frames acting at one time as a back, and at other times as a bedstead. The legs or beams are connected by moveable joints to such frames; so that when required to be

packed, the three frames come parallel to each other, and the legs, or other parts, also fold thereon, the arms or elbows acting by nearly a parallel movement.

Claim.—The patentee makes no claim to the parts separately, nor does he confine himself to the details as herein given, provided the peculiar character of the invention be retained; but what is claimed is the mode herein described of constructing folding sofa or bedstead chairs, viz: a combination of three frames A B C, and jointed arms, as applied and made to operate together, substantially as specified.

No. 10,826.—GEORGE C. JONES and PETER KING.—*Improved Wedge Machine.*—Patented April 25, 1854.

Figure 1 is a perspective view of the machine ready for action; the chisel or shave raised up, and the sockets or grooves I I I I exposed. Figure 2 is a view of the chisel or cutter: D representing the blade; E E the arms by which it is made to slide up and down the guides S S, when in operation; F, the head of the chisel, in which is a slot to receive the lever or handle, and which is attached to the body of the chisel by a joint or pivot, to accommodate it to the motion of the lever. G is a narrower chisel, affixed to the face of D, which stands at right angles to it, and which is used for shaving one edge of the wedge. On H is another similar chisel, affixed to D in the same manner, and used for smoothing the other edge of the wedge. On H will be seen a rounded projection which comes in contact with P, a projection upon the spring *c*, which permits the finished wedge to fall out of the machine.

Claim.—1st. The peculiar form of the chisel, having two or more projecting chisels at right angles to the face of the main chisel, and an appendage for pushing back the spring *c*, as above described.

2d. The application of the spring *c* and its projection P, for the support of the wedge while being shaved, as before described.

3d. The peculiar form and arrangement of the grooves for holding the block to be shaved, and giving shape to the wedges while being shaved, as above described.

No. 10,827.—GEORGE LITTLE.—*Improved mode of operating the Feed-tables of Printing Presses.*—Patented April 25, 1854.

The improvement consists in applying to one or both sides of the feed-table a ratchet wheel *c*, working on a screw F attached to one end of a connecting rod B, the other end of which rod is attached to an arm or crank E, having a series of holes in it, so as to allow a ready means of adjustment of the paper table L, to which it is attached. Also, in attaching two guides H, faced with India rubber, set as represented at fig. 2, so that they press the masses of paper by their edges, in order to prevent, by resistance, more than one sheet of paper being carried to the press at one time.

Claim.—The mode for operating the feed-tables of printing presses, together with the guides, composed of India-rubber or other suitable resisting material.

No. 10,828.—W. KUHLENSHMIDT and W. HAUFF.—*Improvement in Apparatus for feeding paper to Printing Presses.*—Patented April 25, 1854.

The improvement consists in the employment of a semi-circular roller E, so arranged and operated that it will, in its backwood movement from the paper-cylinder, loosen or detach the top sheet of a layer of paper, and then lift up the back end of the sheet, and, in its forward or return movement towards the cylinder, feed it to the fingers. The semi-circular roller is provided with some adhesive cement on that part which bears on the back end of the paper, for the purpose of perfectly seizing the sheets, which are turned over into the fingers of the press.

No. 10,829.—DANIEL R. PRINDLE.—*Improved Field-Fence.*—Patented April 25, 1854.

The nature of this invention consists in the manner of fastening together the adjacent posts of a field-fence, by passing a piece of metal, having a head on one end, through two adjacent posts, and securing the same by means of a wedge or its equivalent at the other end, the posts being so bevelled as to give any desired angle. This is the substance of the inventor's claim.

Figure 1 represents a perspective view of the fence; figure 2 the metal connexion before insertion; figure 3 the metal connexion when the panel has been moved to its proper position.

No. 10,830.—FREDERICK SCHAUM.—*Improvement in Glass Furnaces.*—Patented April 25, 1854.

This invention consists in giving such form to the furnace, by the external and internal configuration of the breast-wall around the pots, that a greater number of workmen or blowers can be employed than in any of the present known forms of glass furnaces; and also in the arrangement of the chimney-flues in relation to the pots and the great chimney-cone, so that a great amount of heat is saved, and the melt conducted more uniformly, and with much greater rapidity than in ordinary glass furnaces.

Claim.—Making the external and internal configuration of the breast-work of the furnace-wall, with the re-entering portions, so as to partly embrace the pots, and to furnish room for additional or extra teaze or ring-holes, substantially in the manner described.

No. 10,831.—J. C. FR. SALOMON.—*Improvement in Brick-Making.*—Patented April 25, 1854.

The nature of this improvement consists in the arrangement and operation of a crane C, mould-box D, and platen E, situated above the platform upon which the bricks are moulded. After the pressure is applied to the platen, the mould-box is caused to rise from the platform —the platen serving to push the bricks from the rising mould-box.

The crane is then carried forward, conveying the mould-box and platen with it, for repeating the operation.

The bricks are dried by means of heated air, conveyed beneath the platform, on which they remain in the very place where moulded.

Claim.—The combination of the swinging-crane, mould-box, and platen, for pressing brick, arranged and operating as set forth in the specification.

No. 10,832.—ALBERT SPENCER and AUGUST LOESCHNER.—*Improvement in Forming and Hardening Hat-Bodies*—Patented April 25, 1854.

The nature of this invention consists in the use and arrangement of two or more sets of endless feed-rollers, aprons, and fan-brushes, in combination with a blower, and a series of blow-pipes, so arranged in connexion with the fan-brushes as to cause the fur or wool to be thrown upon the former-cone from the mouth of a funnel. There are two sets of endless aprons *c c*, running around rollers D. I I are the fan-brushes, propelled by a band. O is the fan-blower case, arranged over the feed-rollers and aprons: it has side tubes or reservoirs for confining the air, so as to cause it to be discharged through the series of blow-pipes M, to carry the fur or wool thrown off by the fan-brushes to the forming-cone. P is the fan-blower, to which motion is communicated by suitable means.

Claim.—The use and arrangement of the series of blow-pipes, as set forth, when used in combination with two or more fan-brushes and feeding apparatus, for the purpose set forth.

No. 10,833.—WILLIAM G. STERLING.—*Improvement in Roofing.*—Patented April 25, 1854.

The invention consists in the use of reticulated wire, imbedded in cement, for roofing, where cloth is used as a foundation, which prevents the cement from cracking and breaking off, as is the case where wood or cloth alone is used as the foundation of the roof of cement.

No. 10,834.—WILLIAM M. STORM.—*Improved Bullet-Moulds.*—Patented April 25, 1854.

The substance of this invention consists in the peculiar arrangement of the slotted cutter *f* and the spring *d* on the moulds, which enables the operator to cut off the spring, and to disengage the ball from the moulds by a single grasp of the hand; while, by simply releasing the handles of the moulds, they are placed in readiness to receive the next casting.

The inventor claims the combination of the parts, as described, which enables him to effect the two purposes.

No. 10,835.—VARANES SNELL.—*Improvement in Machine for Cutting and Skiving the Counters of Boots and Shoes.*—Patented April 25, 1854.

The essential features of this machine consist in a vibrating clamp *b*, for holding the leather while it is being cut, and for releasing it after the operation is finished; and a traversing-knife *a a*, which travels in the arc of a circle, and rounds and levels the counter at the same time—the motions of the clamp and knife being effected at the proper times by a peculiar arrangement of mechanical devices.

Claim.—Holding the clamp upon the leather while the counter is being cut, and releasing it from the same after the operation is finished, by means of the traversing pawl K acting in combination with the lever *i i* and notched-plate *s s*, as above set forth.

Also, a machine for cutting and skiving boot and shoe counters, which has a clamp for holding the leather while it is being cut, and for releasing it after the operation is performed; and a traversing knife which moves in the arc of a circle, and rounds and skives the counter at the same time, as above set forth.

No. 10,836.—DEWITT C. SMILEY.—*Improvement in Oilers for Machinery.*—Patented April 25, 1854.

The nature of this invention consists in connecting with an ordinary oiler an interior chamber, having its bottom extended so as to fill the interior diameter of the can, and form a diaphragm dividing the can into an upper and lower chamber, and furnished with two valves, one opening upwards and the other downwards, so that by the alternate application of pressure on the bottom of the can, and removal of the same, the oil is drawn from the upper to the lower chamber, and forced through the interior chamber and out of the orifice at the extremity of the can tube. In the drawing, *a* is the interior chamber, its bottom *c* extended, filling the interior of the can *b*, and dividing it into two chambers *h* and *i*. In the diaphragm are the valves *e* and *f*, the former opening into the interior chamber from chamber *i*, and the latter opening downward, and forming a communication between the chambers *h* and *i*.

Claim.—The combination of the interior chamber *a* with the can *b* having a flexible bottom; when said interior chamber has its bottom extended to fill the interior diameter of the can, and form a diaphragm dividing the can into an upper and lower chamber, said diaphragm provided with valves *e* and *f*, one opening upward and the other downward, arranged and operating in the manner before described, for the purpose set forth.

No. 10,837.—WILLIAM B. THOMAS and SAMUEL HICKOK.—*Improvement in Railroad Car Seats.*—Patented April 25, 1854.

The improvement described in this patent consists in the construction of jointed or hinged legs A for railroad car seats, so constructed and arranged that the bottom and back of the seat H may be moved for-

ward or backward, obtaining different degrees of inclination to the same, and accommodate the person occupying the seat to an upright, sitting, or reclining posture.

Claim.—The construction and operation of this seat, with the exception of the jointed legs herein described, is substantially the same as that described in the patent granted to the said Samuel Hickok on the 9th day of August, A. D. 1853. That which is considered new is the jointed or hinged legs, in connexion and combination with the other parts of the seat; the claim, therefore, is to the combination of railroad car seats with hinged or jointed legs, constructed and operated substantially as herein described.

No. 10,838.—SIMEON TOWLE.—*Improved Syringe for Eye Baths.*—Patented April 25, 1854.

This bath is made of India rubber, or other elastic substance, and has a bag A, connected by a tube to cap C. Upon rim D is a thin flap 3, which may be notched at several points in order to fit around a sore eye without giving pain. By a gentle alternating pressure upon bag A, the water rises into, and then flows from, the eye.

Claim.—To the combination of the rimmed cap C, connected tubularly with ball A, and arranged and operating substantially as described, to be used for purposes and in cases as suggested and set forth.

No. 10,839.—ISAAC TRUE.—*Improved Reaction Water-Wheel.*—Patented April 25, 1854.

The nature of this invention consists in constructing the buckets of percussion and reaction water-wheels, with projecting hooks on their inner faces, and also with projections or flanges above the rim, so as to afford the most favorable surface for the action of percussion, and in cutting away a portion, thus allowing the water free and unobstructed access to the buckets.

Figure 1 is a plan of the wheel with the improved bucket. Figure 2 is a vertical section.

Claim.—The employment of the hooked surfaces *d*, and curved projecting surfaces *l n* and *r*, in combination with the indented rim *q*, substantially in the manner specified, in the construction of percussion and reaction water-wheels, whereby the effective force of the percussion is greatly increased, as herein fully set forth.

No. 10,840.—C. D. VAN ALLEN.—*Improvement in Invalid Bedsteads.*—Patented April 25, 1854.

This bedstead has a stationary canvass or mattrass *c*, with a central opening for dejections. Under *c* is the mattrass *l*, supported by frame *j*, which is elevated or depressed by windlass *n*; *k* is an extra frame, which may be slid out laterally from *j*, for a temporary additional bed. Frame *e* has one edge hinged, whilst the other may be

raised by windlass *i*, to support the patient's head. *p q* are hand-straps for the convenience of parturient patients.

Claim.—The arrangement and combination of the elevating and depressing bed *l*, with the stationary suspension mattrass *c*, whereby the bed is raised to, and lowered from, the patient when necessary, instead of moving the patient, thus avoiding the necessity of moving or disturbing the patient in the least, substantially as set forth and represented.

No. 10,841.—WILLIAM F. KETCHUM.—*Improvement in Guard-Fingers of Harvesters.*—Patented April 25, 1854.

The improvement refers to casting guard-fingers of the form as represented by drawing B, which heretofore had to be made from wrought iron, by casting them of the form represented in A, and closing, after the necessary dressing, the shanks, to give them the form B.

Claim.—Moulding and casing the blank for the tooth in the open form described, without a chill; then mallifying, dressing up, and bending them into the proper shape as required.

No. 10,842.—ISAAC M. SINGER.—*Improvement in Sewing Machines.*—Patented May 2, 1854.

The nature of this invention consists in forming a seam which on one side has the appearance of stitching with a single thread, whilst on the other side three threads are laid on the surface, in such a manner as to be adapted to ornamental embroidery.

Claim.—Forming seams for stitching and sewing with two threads; the first of which is carried through the cloth at each stitch, and interlaced with the second by forming a loop with the second on one side of a loop formed with the first, and then forming a second loop with the second thread, which is drawn through the loop formed with the first thread, and through the first loop formed with the second thread, as described.

Also, the needle *b* and the looper *c*, in combination with the instrument, or its equivalent, for carrying or guiding the second thread within the range of the looper, substantially as described.

In the drawings *a a a* represent pins which occupy the place of the cloth, and are thus given, so that the stitch may be seen, as it were, on both sides of the cloth.

No. 10,843.—A. YOUNG.—*Improved Method of Discharging Cargo from Canal Boats.*—Patented May 2, 1854.

The substance of this invention consists, not in any of the devices taken separately, but in the combined arrangement of the suspension trucks and the dry dock, whereby the cargo may be discharged with despatch and with but little labor, and be run off at a high level to any distant place of transfer or deposit, without inconvenient detention of the boats.

No. 10,844.—N. G. NORCROSS.—*Certain Devices in Tonguing and Grooving.*—Patented May 2, 1854.

One claim is, to so arranging the saws and cutters, that a recess *a b* shall be cut slightly beyond the shoulder or tongue. Also, a groove *v*, in the feed-rollers, to allow the strips sawed from the sides of the tongue to pass out with the board whole. Also, the mode of adjusting the saws by two nuts *l* and *k*, working on a right and left hand screw-shaft *d*.

No. 10,845.—MATTHIAS LACHENMAIER.—*Improved Device in Constructing Strap-Iron Railing.*—Patented May 2, 1854.

The drawing presents a front view of the improvement, and the claim of the patentee is a sufficient description.

Claim.—The manner herein described of constructing and fitting together crimped wrought metal railing; by constructing the cross bars at the extremities of their crimps, or bends, with punched or pressed studs *r r* and *s s*, projecting—either successive pair in each bar—in opposite directions alternately, to form supports or stops to the bars on either side or edge of their crimps, and on both sides or faces of the railings, to prevent the bars from slipping out of their crimped bearings, or from out of line with them.

No. 10,846.—WILLIAM M. STORM.—*Improvement in Chargers for Fire-Arms.*—Patented May 2, 1854.

The substance of this invention consists in the general arrangement of the parts as illustrated, viz: a fixed rammer and moving ball-nozzle, combined with a number of distinct ball-chambers.

No. 10,847.—MAHLON LOOMIS.—*Improvement in Plates for Artificial Teeth.*—Patented May 2, 1854.

This invention consists in making a whole set of upper or lower teeth, together with the gums or plate, of one piece of porcelain, to save the expense of gold; as shown in drawings, where figure 1 is a set of upper, and figure 2 of lower teeth. The inventor disclaims porcelain gums and enamel upon a metallic plate, but claims the above-described manufacture.

No. 10,848.—MERVIN T. LANDFEUR.—*Improvement in Reed Boxes for Musical Instruments.*—Patented May 2, 1854.

The reed boxes are operated as usual by bellows; the reeds are constructed as represented by figures 1, 2, 3. These are placed in separate chambers, each graduated to a particular note. *Claim.*—1st, the method of inserting reed boxes in chambers of graduated length and depth and width; 2d, tubing or chambering the reed boxes; 3d,

blocking the reed box, and mortising the block where it overlies the locality of the reed.

No. 10,849.—HALVOR HALVORSON.—*Improvement in process for Distilling Rosin Oil.*—Patented May 2, 1854.

The improvement consists in mixing to one part of rosin, about five parts of clay, before distilling; which it is contended will give an oily product containing less pitch than the same article would give if distilled from alkaline earths.

Claim.—Combining clay with rosin, and subjecting the mixture to distillation, so as to produce therefrom an oily product, substantially as specified.

No. 10,850.—HALVOR HALVERSON.—*Improvement in Distilling Apparatus.*—Patented May 2, 1854.

The improvement chiefly consists in providing, within the still or stills, a stirring apparatus, in order to present a diffused surface of the fluid to the action of heat; and in forming the connecting pipe of stills with a flexure *b*, in order to make them self-acting.

Claim.—The rotary cup E, the rake I, discharge-pipe K, or their equivalents, in combination with a still D, and made to operate therewith, substantially as specified.

No. 10,851.—JOHN W. ADAMS.—*Improvement in Spinning Cotton.*—Patented May 2, 1854.

This invention consists in interposing, between the spindle or bobbin and the flyer, a carrier, moving with the spindle, over which the thread passes from the flyer to the spindle, so that the dragging or drawing of the flyer or the thread on the edge of the cap shall be effected by the said carrier, the thread being in contact therewith, so that the power and the resistance shall at all times be at the same distance, without reference to the varying of the winding diameter. In the drawing, *a* represents a line-spindle, passing through a tubular spindle *c*, in which it is free to slide vertically, and with which it is connected by a feather, so as to rotate therewith. On the upper end of the spindle *a* is the bobbin *h*, surrounded by a concentric tube *g*, being of sufficient length to admit the whole length of the bobbin within it. This tube is rotated in the usual manner, and its upper end should be rounded to control the carrier *i*; *l* represents the flyer or traveller.

Claim.—The employment of the thread carrier in combination with the central spindle for winding on, with or without a bobbin or spool, and with the ring-groove and traveller, or its equivalent, substantially as specified.

No. 10,852.—WILLIAM E. ARNOLD.—*Improvement in Railroad Horse Power.*—Patented May 2, 1854.

The nature of this invention consists in making the platform of grooved metallic plates, the grooves forming rack-teeth to drive the pinion. Also, in the lip and groove, and hooks on the platform, for making the continuous chain, without using links, pins, or any rigid connection between them.

The platforms A are made of cast or other iron, the grooves on which constitute rack-teeth B, which operate the cogs *c* on the pinion D. The front end of each platform has a lip F, which fits into a similarly shaped recess G in the rear of the preceding one. On one of the platforms a hook H inclines downward, and on the other a similarly shaped hook I inclines upward. By means of the lip F, the recess G, and the hook H I, the platforms are firmly secured to each other, and so on through the entire series. *Claim.*—The lips F F, the recess G G, the hooks H I H I, by which the series of platforms A A are united into a continuous chain platform, without any other fastenings than those afforded by their own peculiar shape; and thus avoiding the use of links, bolts, or similar fastenings, substantially as described, and as shown complete in the figure.

No. 10,853.—JOHN ALLENDER.—*Improved Socket for Holding Tools.*—Patented May 2, 1854.

The claim allowed is to the face-plate G, with an eccentric groove or slot K, in combination with a sliding-catch *f*, with the projection *i* fitted to such groove, and so arranged as to traverse the catch by turning the plate.

No. 10,854.—WILLIAM BALLARD.—*Improvement in making Ships' Knees.*—Patented May 2, 1854.

The invention consists in making knees out of straight timber, bent into form, either with or without saw-slitting it, and combining with the bent timber at the convex part such pieces as will make up the knee.

No. 10,855.—WILLIAM H. CHURCHMAN.—*Improved Hydraulic Heater.*—Patented May 2, 1854.

The claim explains the nature of this invention.

Claim.—The attachment of all of the radiating or circulating tubes, in one or more series of rows, directly to the boiler or main receptacle for water, together with any and all equivalents thereof.

No. 10,856.—JOHN CRABTREE.—*Improvement in Piston Packing.*—Patented May 2, 1854.

The nature of this invention is very clearly set forth by the claim.

Claim.—The open conical ring G, in combination with the lugs *b b*

or their equivalents, cast on the open inner ring *c*, and the flanged adjusting-screw H^1 or its equivalent, the shorter adjusting-screw H^1 and follower a^1, arranged and combined as described and illustrated.

No. 10,857.—HENRY W. FARLEY.—*Method of Setting the Valves of Locomotives.*—Patented May 2, 1854.

The general character of this invention consists in placing a pair of rollers, *c c*, upon a shaft D, fixed transversely beneath the road-way, the drivers A A resting on the rollers, which, being turned, cause the drivers to revolve for the purpose of adjusting the eccentric and valves.

No. 10,858.—JOHN GALLAGHER.—*Improved Metal Cutter.*—Patented May 2, 1854.

Claim.—The arrangement of the movable cutting-die E, in the eccentric lever D, operating in connection with the fixed cutter H.

No. 10,859.—CURTIS GODDARD.—*Improved Machine for Making Bed Pins.*—Patented May 2, 1854.

This improvement consists in the combination of cutters in a hollow mandrel with a movable cutter.

Figure 1 is a prospective view of the machine; figure 2 is a longitudinal section of the mandrel, of which *b* is the body, *c* a movable cutter turning on a pivot *e*, in such manner that when the end of the pin *h* presses the cutter at *i* the end *m* is forced down, and by means of a V-shaped edge cuts the part of the head *n*. The cutter *c* is so framed that centrifugal force throws the end *m* out, when the pressure is removed at *i*. The pin is then removed, and cut off with the saw *d*.

Claim.—The combination of cutters in the hollow mandrel with the movable cutter, operated by the pin pressing the cutter at *i*, or by a disk of metal moved by the pin, or other means substantially the same, as herein set forth.

No. 10,860.—ROBERT HODGIN.—*Improvement in Straw-Cutters.*—Patented May 2, 1854.

This improvement consists of a straw-rest or table A^1, with teeth d^1, resting on the bottom of the feed-box A, and moved intermittingly forward the whole length of the feed-box, with its load of straw. As lever H is elevated, cutter-frame G also rises, carrying one end of lever L. This movement brings forward the lower end of arm *w* and of pawl *x*, setting in motion roller E, and winding the cord which passes from said roller around a pulley to frame A^1; then lever H descends, carrying the knife, whilst frame A^1 rests. The operator returns the table A^1 by hand for reloading.

The straw-rest A^1 is claimed, as moved by intermittent motion the whole length of feed-box.

No. 10,861.—A. C. KETCHUM.—*Improvement in Car-Trucks with Adjustable Axles.*—Patented May 2, 1854.

Figure 1 is a side view; figures 2 and 3 are plans—figure 2 showing the wheels inclined in an opposite direction from that shown in figure 3.

Claim.—The combination of the sliding side-pieces A A A^1 A^1, the transverse sliding bar F, and the lever G, in the manner substantially as described, for the purpose of causing the axle-boxes to move in such a way as to make the axles assume the form of radii or normals to the curve, and thereby keep the wheels in line with the track.

No. 10,862.—CONRAD LEIBRICH.—*Trunk-Lock Hasp.*—Patented May 2, 1854.

Claims.—1st. The combining of a spring *a* with a hinged hasp B, so that the lower or hinged portions thereof shall stand off from the trunk.

2d. Placing the hasped catch *e* in a solid projection *d*, which enters the lock with the hasped catch, and takes all the strain incident upon the lid to open, and thus protects the catch itself.

No. 10,863.—W. F. PAGETT.—*Improvement in Harrow.*—Patented May 2, 1854.

This harrow consists of a series of sectional beams A B C, each section bearing a tooth O, fastened together by rods N, which also pass through tubes S.

Claims.—1st. Constructing harrow-beams of sections of iron, with the teeth wrought solid upon and with them.

2d. The combination therewith and arrangement of cross-rods, with screws and tops, and pipes or tubes, or their equivalents, to keep the beams and sections in their places.

No. 10,864.—G. M. PATTEN.—*Improvements in Machinery for the Manufacture of Clinch Rings.*—Patented May 2, 1854.

The claim is to the spring-seat H of the lower die F and elastic cleaver G, when arranged and operating together as specified, so that not only is the finished clinch-ring forced upwards out the lower die, and detached from the upper one, to permit of its easy removal by the bar in feeding forward, but also whereby the spring-seat H and cleaver G are made to act as elastic grippers to the ring, to hold or keep it in its seat till removed by the bar, to avoid breakage of the machine, and whereby the cleaver G serves as an elastic guide to the bar, to facilitate the entry or feed of the bar, and to keep it in a fair or flat position for the operation of the punch upon it, as specified; the said cleaver G and spring-seat H being hung and operated so as to exert a continual tendency to approach each other, both during the up and down stroke of the punch, as herein set forth.

No. 10,865.—W. B. and G. M. Ramsay.—*Improvement in Flexible Harrow.*—Patented May 2, 1854.

This invention consists in connecting three frames A B C by three joints *a b c*, to enable the harrow to adjust itself to uneven ground; and is claimed as an improvement on account of its freedom of motion, simplicity, and cheapness of construction.

No. 10,866.—William Robinson, Jr.—*Improvement in Making Rope.*—Patented May 2, 1854.

This invention consists in the employment of a ring with cogs on both inner and outer edges, said ring being revolved by pinions meshing into the exterior cogs, for the purpose of regulating the relative twist of the separate strands and the entire rope, by diminishing, to a greater or less extent, the number of revolutions of the flyers upon their axes, while performing a single revolution about the main axis; also in an arrangement of clamps for receiving the finished rope, firmly holding it during the laying operation, and finally conveying it from the machine.

Claim.—The employment of the cogged ring *d* for giving the flyers an independent rotation for twisting the strands, and, by its own revolution, regulating the amplitude of that twist. Also the employment of the rotary clamps b^1, in combination with the cams d^1 and spring e^1, for grasping, conveying, and releasing the rope.

No. 10,867.—Sewall Short.—*Improvement in Violins.*—Patented May 2, 1854.

The invention consists in combining a metallic horn or trumpet with a violin, violincello, viol, and instruments of a similar character. The bell of the horn B is united by a tube C, beneath the finger-board F, to the body of the instrument at D, the air from beneath the sound-board of the violin A having free passage through the horn.

Claim.—To the application of a trumpet or horn to violins, bass viols, and other similar instruments, in the manner described and for the purpose set forth.

No. 10,868.—Philander Shaw.—*Improved Air-Engine.*—Patented May 2, 1854.

The invention consists, 1st. In the employment of auxiliary heater H, through which the air to be heated passes in one direction, and the exhaust air and the products of combustion in the opposite direction; the fresh air being pumped through the pipe A^1 and the compartments H^1 H^2 H^3, and the short communication pipes L L^1, and valves *e* e^1, and pipe F, and valve *b*, into the heater A; the exhaust air and the products of combustion being passed through the tube *a*, chamber E, and pipe C, tubes K^2 K^1, and c^2 c^1, and *c*, and smoke-stack M.

2d. In the arrangement of the cold water reservoir R, flexible pipes

S S^1, communicating with the interior of the hollow piston and rod, for the purpose of refrigerating the piston, &c.

No. 10,869.—LeGrand C. St. John.—*Hydraulic Engine.*—Patented May 2, 1854.

This invention relates to certain mechanism for regulating the flow of water into and from a chamber B, containing the float A, to operate the engine; also, a device for producing a continuous rotary motion in the same direction, whether the float be rising or falling with the water.

Motion is thus generated: A cord, *g*, passes over pulley *f* on the main shaft, and is attached at one end to the upper part of the float A, and at the other to the bottom. Hence, as the float rises or falls, the machinery is operated.

The valve I, letting the water in and out, is moved by rod J, connected with suitable mechanism above.

On two shafts, $l\ l^1$ are pinions W W^1 gearing into main pinion on shaft *h*; a ratchet wheel $r\ r^1$ is placed on these shafts, having pawls, by means of which one pinion, as the float rises, turns the machinery, while the other pinion remains stationery; as the float descends, the other pinion turns the machinery in the same direction, the former pinion (by means of its pawl, non-taking) remaining stationary.

Claim.—Producing continuous motion in the same direction, and operating the cylinder I (the rake) to let in and out the water.

No. 10,870.—John M. Weare.—*Milker's Protector.*—Patented May 2, 1854.

The milker's protector is a double forceps, as shown in the drawing, where F E are an arm and jaw in one piece, turning upon pivot N, and held forward by spring L; *i* and *a* are also an arm and jaw, turning upon pivot K, and held forward by spring M; A is a third arm, having jaws B and C, and also projections G and H. The jaws B and E are designed to grasp the ham-string of the cow, whilst the brush of the tail is seized by jaws C and *a*, and thus kept from the milker's face. The claim relates to the whole instrument.

No. 10,871.—Elbridge Webber.—*Improved Rotary Planing-Knife.*—Patented May 2, 1854.

This improvement consists in combining peculiarly-formed knives with oblique eliptical cutter stocks, and in arranging the same for the purpose of planing lumber.

Figure 1 is a side elevation of the machine.

Figure 2 is a view of the stock and knife attached to the shaft.

Figure 3 is a side view, showing the construction of the knives.

Claim.—Combination of the knives *r* with the stock *s*, constructed, arranged, and operated substantially as set forth.

No. 10,872.—Asa Weeks.—*Improved Expanding Bit.*—Patented May 2, 1854.

The principal feature of this invention is connecting the two cutters with each other in such manner that they shall move out and in simultaneously, each at an equal distance from the centre of the bit.

Figure 1 presents a side view of the bit.

Figure 2 is a front view of the same, the cap *a* being removed to show the parts within.

In the drawings, c^1 *c* represent the cutters, which are furnished with rack teeth *e* e^1, that engage with a small pinion *i*, the shaft of which passes through the bit, and is furnished with a screw head, by means of which the pinion is turned, and the cutters are run out as required.

Claim.—The method, herein described, of connecting the two cutters with each other, so that they shall move out and in simultaneously and equably, as set forth.

No. 10,873.—Parley Williams 2d.—*Second Improved Slatting Machine.*—Patented May 2, 1854.

The principal feature in this machine is in the manner of holding the wheel, or other article to be slotted, and attaching, feeding, and controlling the operation of the cutting tool.

Figure 1 is a front elevation of the machine.

Figure 2 is a vertical section of the same, taken at right angles with figure 1.

Claim.—1st. The mandrel K secured in the top of the column which supports the hub, serving, with the aid of a key, to hold the hub in place; and containing a slot *g* on the side, in close contact with the hub, which serves as a guide for the tool while cutting the slot in the hub, or other similar article, substantially as described.

2d. The combination of the wedge *h*, the screw *j*, and the spring *l*, the wedge being placed in a recess in the mandrel behind the tool, and serving to feed and hold the tool to its work, the screw being attached to the wedge, so as to bear on the top of the mandrel, and control the descent of the wedge; the spring being attached to the tool so as to bear on the hub and hold the tool back against the wedge, and thus prevent its overloading itself; all substantially as set forth.

3d. Attaching the tool to its stock, by a button or knob *b*, at the bottom of the tool, fitting loosely into a slot *c* in the top of the tool-stock, which has a mouth *e* narrower than the button, but which extends only partly across from the front of the stock; said stock being arranged in such a direction, and its narrow mouth being of such a length, as to allow the tool, while attached to the stock, to move back and forth as far as it is required for the feeding operation, but to allow the tool to be withdrawn by moving it back beyond its most backward operative position, as set forth.

No. 10,874.—Seth Whalen.—*Improvement in Hay-Knives.*—Patented May 2, 1854.

The improvement in this knife consists in the simplicity of constructing the shank, by bending the blade-plate A laterally, as seen in figure 2, and attaching it obliquely to a straight handle C, figure 1.

Claim.—The form of this knife, as being very convenient in cutting hay, and of cheap manufacture.

No. 10,875.—Simeon Coon.—*Improvement in Sewing Machines.*—Patented May 9, 1854.

The nature of this invention consists: 1st, In drawing a sufficient quantity of thread from the shuttle bobbin to form the stitch in advance of the forming or drawing up of the stitch, so that in paying off the thread from the shuttle the tension or strain shall always be uniform, and not variable, as is the case where the act of drawing up the stitch must draw the thread from the spindle or cop, besides drawing it from the shuttle. 2d, In a double-acting feed motion, which feeds the cloth either way to the needle, when said feed motion always retains the same relative motion with regard to the needle, or so that the feed shall take place whilst the needle is advancing towards the cloth, and not when it is leaving the cloth to draw up the stitch, and this whether the cloth is fed to the right or to the left.

Claim.—The combination of the slot R, in the shuttle, and the pin or stud *l*, in the raceway, for the purpose of drawing the thread from the shuttle bobbin, so that there may be an uniform tension upon the shuttle thread when drawing up the stitch, as described; also in contradistinction from the double-acting dog, or pawl and ratchet, which changes the time of feeding forward the cloth, relatively, in regard to the motion of the needle, the separate pawls *t* and *v* operated by a cam and levers, or otherwise, so that the feed, whether reversed or not, shall always remain relatively the same with regard to the motion of the needle, or so that the feed shall take place whilst the needle is going down, or towards the cloth, and not when it is leaving the cloth to draw up the stitch, substantially as described.

No. 10,876.—E. L. Norfolk.—*Improvement in Machinery for Dressing Flax.*—Patented May 9, 1854.

This invention consists in a certain device for regulating the movements of the rollers which supply the flax to the machine, whereby the said rollers are made to feed the material at a speed corresponding universally with the quantity passing between them, or to stop them entirely when the quantity becomes so great as to render a stoppage necessary.

Claim.—Governing the movements of rollers *c c*, which supply the material to the machine, by means of wedges *p*, which are suspended in such a way as to be caused by the rising and falling of the lids K to rise and fall, and thus regulate the position of bars N, which are acted

upon by the cams O, for the purpose of transmitting motion to the feed, and thereby regulate the amount of motion which the bars receive from the cams, as set forth.

No. 10,877.—CLARK WHEELER.—*Improvement in Bee Hives.*—Patented May 9, 1854.

This improvement consists in a drone trap B placed under the bee door A^1, and drone passage *a*. F G and H are pendant doors, which may be pushed open by the drone in entering the trap, but close again to prevent his return to the hive. These doors, and partition *b*, are made of wire gauze to admit the light from window C into passage F *a*. Passages D E *c* are intended for the escape of working bees. These passages, as well as A, are too small for drones to pass; and the latter, finding no egress from the hive, are decoyed, by the light, into trap B.

Claim.—The drone trap, as described.

No. 10,878.—HEMAN CROSBY, Jr.—*Improvement in Sewing Machines.*—Patented May 9, 1854.

Claim.—An adjustable cam, or its mechanical equivalent, in combination with the friction brake, for the purpose of intermitting the action of the brake upon the thread during the feed, and thus obviating the danger of sundering the thread in rapid work, during that moment of extreme tension, as set forth; also enlarging that portion of the needle which, having entered the material, is to retire from it before the pull upon the last loop is commenced, and in the manner and for the purpose described.

Figure 1 is a perspective view; figure 2, a front view of the cam; and figure 3 is a front view of the enlarged needle.

No. 10,873.—CHRISTOPHER HODGKINS, assignor to NEHEMIAH HUNT.—*Improvement in Sewing Machines.*—Patented May 9, 1854.

The nature and construction of this machine will be understood by reference to the claim and accompanying drawing.

Claim.—The peculiar manner in which the brake clamp N is constructed, applied to, and made to operate in, the groove *a* of the feed-wheel, whereby the bearings of the clamp on the two opposite concentric surfaces of the groove are curved—concentric lines or surfaces running parallel, or nearly so, to the plane of the feed-wheel, instead of perpendicularly to it; such an arrangement of the bearing lines or parts of the clamp rendering its hold on the wheel far more certain than when they are made in length only equal to the depth of the groove, and to stand perpendicularly to the frame of the feed-wheel.

Also the mode of operating the brake-clamp or lever N; or, in other words, the arrangement and combination of the spring P, the slide Q, cam R, cam S, lever O, and spring T; such mechanism causing the

clamping of the lever-brake N to the feed-wheel; to be wholly done by mechanism acting entirely before, and separate from, and not controlled by, that which produces the movement of the clamp, by which the corresponding extent of motion is produced in the feed-wheel.

No. 10,880.—Otis Avery.—*Improvement in Sewing Machines.*—Patented May 9, 1854.

The nature of this invention relates to the so hanging of the upper needle bar as that it may be turned up or swing around, for the removing of the cloth, or any other purpose. and to the individual and combined adjustment of the needles, for the double purpose of regulating the relative positions of the needles to each other, and their working position with regard to the material to be sewn; also the so arranging of an adjustable table or support for the cloth, with regard to two needles which have a fixed centre, at which the stitch is formed, that, by raising or lowering said table, the stitch may be thrown to one side or other of the cloth, or in the centre thereof, as may be desired.

Claim.—The so arranging the upper needle bar D^1 on a pivot *i*, and controlling it by a spring *j*, or their equivalents, as that it may be swung around to remove or replace the cloth or material to be sewn, substantially as described.

Also the arrangement and combined adjustment of the two needles, for the purpose of regulating the relative positions of said needles to each other, and their joint positions in relation to the material to be sewn, substantially as described.

Also the so arranging of an adjustable table O, with regard to two needles which have a fixed centre, at which the stitch is formed, that, by raising or lowering said table or the cloth, the stitch may be thrown to one side or the other, or in the centre thereof, substantially as described.

No. 10,881.—George T. Enoch and Daniel Wissinger.—*Improvement in Seed Planters.*—Patented May 9, 1854.

The improvement refers to the peculiar form of the seeding valve-bar M, and to the mode of giving said bar a longer or shorter stroke of vibration to suit the desired quantity of seed to be received and transmitted to the ground through the cavities *o o o* at each vibration, by shifting the tappet-wheel L along the axle B, and consequently, at any desired distance from roller *m*, of bar M, by means of lever J and its connecting parts *k*, *g*, and *i*.

Figure 1 is a plan of the apparatus.

Claim.—The mode of adjusting the tappet-wheel L, in combination with the peculiar form of the sliding-bar M, to suit the nicest differences in any desired quantity of seed to be sown, substantially as described.

No. 10,882.—WILLIAM J. CASSELMAN.—*Improved Hub-Borer.*—Patented May 9, 1854.

This improvement consists in having a cutter *h* attached to one end of a lever G, and having a pin *g* on the opposite end, the pin working in an oblique slot *f*, in an adjustable plate J, secured to a suitable bed H. The pivot *d*, on which the lever works, passes through a rod F, that has a screw-thread *c* cut upon a portion of it, and a nut L, formed of two halves $j\ j^1$, working thereon. The rod and lever are operated by turning the nut, and the cutter is made to pass through the hub N in an oblique direction.

Claim.—Boring taper holes through hubs by means of lever G, secured by a pivot *d* to a rod F, which is drawn through the mandrel-hole of the hub; said lever G having a cutter *h* at one end, and a pin *g* at the opposite end, which pin fits in an oblique slot *f*, in an adjustable plate J; the slot *f* giving the proper movement to the cutter as it passes through the hub.

No. 10,883.—WILLIAM DAMEREL—*Extension Bit Key.*—Patented May 9, 1854.

The improvement claimed is in so arranging the main bit of the key that it can be shoved into the key-hole to plug it, by means of a rod passed through the shank.

No. 10,884.—HEMAN H. DEAN.—*Improved Felloe Machine.*—Patented May 9, 1854.

Figure 1 is a plan of the machine, and figure 2 a vertical section of same. The improvement consists in a combination of devices for removing the concave felloe-guide from the cutters, and for regulating the approach of the guide and felloe to the cutters.

Claim.—The combination of mechanism operating the guide *n*, namely, the lever G, rod H, and springs *s s*, arranged and operating substantially as set forth, for the purposes specified.

No. 10,885.—JACOB EDSON.—*Improved Pump.*—Patented May 9, 1854.

This pump is designed to be used either as a lift or a force-pump; and it may be readily changed from one to the other by tightening or loosening the screw *b*, to which is attached the packing *c* of the piston, that is composed of India rubber or other suitable substance, and which is forced into the conical opening *d*; *e e* are holes bored through the socket *f*, round its whole circumference, and opening a communication between the cup D and the interior of the tube A.

Claims.—1. The tube A in communication with the air-chamber B, constructed and operating in the manner and for the purpose set forth.

2. The cup D in combination with the holes *e*, and the packing *c*, constructed and applied to a force-pump as described, and for the purpose set forth.

3. The inclined partition E, in the rear of the spout G, operating in the manner and for the purpose set forth.

No. 10,886.—CHARLES K. FARR.—*Improvement in Cultivators.*—Patented May 9, 1854.

The cultivator is designed for opening furrows by means of a broad tooth or coulter E, adjustable by bolt *d*, and followed by a box or bed A, having bottom *a* and inclined sides *b b*.

The beam is not shown in the drawings.

Claim.—The bed A, with inclined sides *b*, as described, which, following the trace of the coulter, renders the sides of the furrows compact, and prevents the falling in of the earth, substantially as herein set forth.

No. 10,887.—ALBERT FINK.—*Improvement in Bridges.*—Patented May 9, 1854.

The substance of this invention consists in the peculiar combination of the different systems of triangular bracings B, B, B, B^1, B^1, B^1, and B^2, B^2, B^2, as shown in the drawings; so that a weight coming on one of the systems of the truss, as on B^1, is not only carried over one or more other systems before it is carried back to the abutment, but the foot of the post of each triangle shall be capable of settling vertically or moving to the side, so that the tension rods of each system of the triangular bracings will be strained equally, when the bridge settles under a superincumbent weight; which effect could not be attained unless the foot of the post of each triangle possessed the power of motion downwards as well as to the side.

No. 10,888.—CHARLES R. FOX.—*Improved Journal-Box for Saw-mill Carriages.*—Patented May 9, 1854.

The figure shows one of the carriage-wheels B, with its boxes C^1.

The object of the patentee is to furnish the means of giving any desired set to the log, and also, to furnish a sure and simple set-off for the carriage when gigging back, and a set up when moving forward.

Claim.—The construction of the boxes C^1, with opposite inclined inner faces f^1, f^2, for giving the requsite set-off to the cariage when gigging back, and again setting up when moving forward for the cut.

No. 10,889.—NELSON GAVIT.—*Improvemont in Machine for Cutting Paper.*—Patented May 9, 1854.

The object of this invention is to give to the machine for cutting paper the capacity for varying the length of the sheets cut from the web, to any degree, small or great, within the two extremes of length to which the machine is adapted, and to produce such changes while the machine is at work. The web of paper is wound upon a spool,

which is laid in the cutting machine on bearings that allow it to turn, and the end of the web inserted between a pair of feed rollers that draw it off the spool at a uniform rate, and pass it between the jaws of a pair of shears, or beneath a knife that, acting at intervals, divides the web into sheets; then as the knife passes through the web most frequently, the sheets are shortest, and when it passes through the slowest, the sheets are longest, because the feed in the cases supposed is uniform.

Claim.—The method of adjusting the cutting of sheets from a web of paper, whereby the length of the sheets can be varied by any required proportionate amount of the whole range of variation to which the machine is adapted, however small or large the same may be; thus rendering it possible, with a continuous feed of the web of paper under an intermittent cutter, to sever the sheets half way, or thereabouts, between water marks nearer together at one part of the web than at another.

No. 10,890.—PLATT C. INGERSOL.—*Improved Mortar and Pestle.*—Patented May 9, 1854.

The nature of this invention consists in combining the pestle with the mortar by means of a ball fitted to a corresponding cavity in a spring bar connected with the mortar.

In the drawing, *a* represents a mortar; the pestle *b* has at *d* a spherical swell fitted to a socket of corresponding form in a bar *e*, the ends of which are fitted to suitable sockets in the mortar. To the upper surface of the bar are attached two leaf springs, *f f*, which extend from near the centre each way to the ends.

Claim.—The manner of arranging and combining the pestle with the mortar, by means of the ball on the handle of the pestle fitted to a corresponding cavity in a spring bar, substantially as and for the purpose specified.

No. 10,891.—WILLIAM LOUGHRIDGE.—*Improvement in mode of Unloading Canal-Boats, &c.*—Patented May 9, 1854.

The substance of this invention consists in the combined arrangement of the vessel with valves in the bottom, (shown at *b b*,) the dry dock with valves immediately below those in the boat, as at *a a*, and the shutes G to carry off the load into boats or other receptacles.

The devices, taken separately, are all admitted to be old.

Claim.—The method of unloading boats, thus arranged, as presenting novelty and economy in time and money.

No. 10,892.—H. G. MARCHANT.—*Manure and Sand Loader.*—Patented May 9, 1854.

The substance of this invention consists in the combined arrangement of the box A, the trough E, and the rake F, by means of which

the manure or sand is loaded into carts through the opening D of the loader; the same being effected by horse power attached to the ropes G. The devices, taken separately, are not patented.

Claim.—The transportable manure-loader, consisting essentially of the following elements: the body or box A, the trough E, and the rake G, constructed and arranged as described.

No. 10,893.—J. and G. W. PRESCOTT.—*Improved Machine for Reducing Wood to Slivers.*—Patented May 9, 1854.

This machine is designed for making stuffing for mattresses from wood, in such a manner that the material, when it leaves the machine, shall possess the greatest degree of elasticity possible. The wood, being reduced by cutters set obliquely in their stocks, all the material removed is consequently curled in long helices.

Claim.—The arrangement of the planes *g h* so that each shall cut not only with a drawing stroke, but shall curl the shavings into helices, as specified, and, in combination with the feeding carriage P and the feeding screw R, the movable straddle or sliding block Y, and the scroll cam Z of the screw; the same being made to operate together substantially as specified; also the tripping rest *s*, as combined with the weighted lever X X and the feeding carriage P, and used as specified.

Figure 1 is a transverse vertical section of the machine, taken through its feeding carriage, and the feeding screw thereof.

Figure 2. Top view of the machine.

Figure 3. Horizontal section of the plane-stock and plane-irons.

Figure 4. Side view of the machine.

Figure 5. Side view of the grooved plane-iron.

Figure 6. Detached view.

No. 10,894.—J. AUGUSTUS ROTH and JOSEPH LEA.—*Improvement in Bleaching Apparatus.*—Patented May 9, 1854.

Improvement and claim consist in the arrangement of the series of graduated and compensating upper and lower rollers, in combination with the vat, for the purpose of treating simultaneously a series of parallel layers of woven fabrics, in the manner and for the purpose substantially as herein specified.

No. 10,895.—JAMES ROGERS.—*Improved Machine for Marking out Sash.* Patented May 9, 1854.

The design of this invention is to mark out the heads of mortices in sash or other small work requiring two or more mortices in the same piece, with a single motion, and to operate on two pieces at the same time.

The drawing represents the machine as seen when ready for action, and gives a view as seen at I I I I of the moveable knives or markers.

A further description of the machine would seem to be unnecessary, as the drawing sufficiently sets forth its character.

Claim.—Moveable knives or markers, moveable stops and slides, or their equivalents, and the manner of adjusting the top, and of causing markers in the top to correspond with the bottom markers; also the manner of applying the scales to the machine.

No. 10,896.—WILLIAM S. REINERT.—*Machine for Weighing and Printing Butter.*—Patented May 9, 1854.

The nature of this invention consists in suspending to one end of a scale beam a vessel or mould F, in which the butter is weighed and printed, counterbalanced by a suitable weight at the opposite end of the lever or beam, the mould being provided with a movable bottom, capable of being raised with the butter, when formed and stamped by a button L^1, on the end of an upright rod L, moved by a lever N, connected to another lever P above the scale beam, to which upper lever the pattern or stamp is attached in such a manner as to enable the butter to be raised out of the mould with facility and despatch.

Claim.—The combination of the mould F, for containing the butter, suspended to the lever or scale beam, and its attachments, plunger or piston G, having the desired configuration on its lower surface, and upright rod and button for raising the circular plate or piston in the bottom of the mould, together with the levers for operating the same for weighing, forming, and branding or imprinting the butter in parcels, and discharging the same from the mould, substantially in the manner described.

No. 10,897.—A. M. SPRAGUE.—*Improvement in the Flues of Steam Boiler Furnaces.*—Patented May 9, 1854.

Claims.—1. The moveable adjustable bottom M of the flue-space, for the purpose of adapting the furnace to different kinds of fuel.

2. For the inclined vibrating bridge *z*, so constructed and arranged that it will conduct the flame from the furnace to the flue.

No. 10,898.—A. M. SPRAGUE.—*Improvement in the construction of Pistons for Steam Engines.*

This improvement consists in so constructing the hub or interior body of the piston that it may be removed with the rod, by simply removing the cap or follower, and, in the direction of the follower, leaving the outer portion of the body and packing undisturbed, and giving large space through the body of the piston to afford room for truing the cylinder.

No. 10,899.—DANIEL TALLCOT.—*Self-acting Safety Hatch.*—Patented May 9, 1854.

The substance of this invention consists in the combined arrangement of the trap-doors A, the lever H, the roller *g* of the carriage, the

half-pulley G, and the spiral J, by means of which the trap-doors are opened automatically, as the carriage passes up and down through the hatches; the doors being counterpoised by the spiral spring J, and kept closed by the springs L, which throw them out of a vertical position as soon as the carriage passes, when their own weight causes them to settle.

No. 10,900.—ENOCH WOOLMAN.—*Improvement in Hinges.*—Patented May 9, 1854.

Claim.—The arranging of the roller I, so that it can be traversed towards or from the pivot of the hinge, in combination with the screws G G^1 in the inclined planes, so that it can be used either as a self-shutting or self-retaining hinge when open, or partially open, substantially as described.

No. 10,901.—R. and T. WINANS.—*Improvement in Locomotive Fire-Box.* Patented May 9, 1854.

Claim.—The downward and rearward inclination of the top or roof of the fire-box, when this is connected with the flat grate-surface and the usual feeding-hole or door, and with or without the fuel feeding-boxes through the roof.

No. 10,902.—FRANCIS DAVIS, assignor to J. MASON REED.—*Improvement in Screw Jacks.*—Patented May 9, 1854.

The nature of this invention consists in the use of a right and left screw, with socket C for the operating lever D between them, whereby the lever is situated out of the reach of the body being raised, and is not obstructed in its operation thereby. It is obvious that the motion of the head A of the jack is double that of the ordinary screw-jack for an equal motion of the operating lever.

Claim.—A new tool or instrument for the purpose of raising heavy bodies, constructed and operating substantially as described.

No. 10,903.—W. BAKER.—*Joints for Clap-boards.*—Patented May 16, 1854.

The figure shows the form of the joints.

Claim.—Making the joints of clap-boards, etc., in the manner shown.

No. 10,904.—CYRUS ROBERTS.—*Improvement in Harvester-Rakes.*—Patented May 16, 1854.

The improvement is designed to throw off from that end of the platform A, towards which the cut grain has been pushed, in suitable quan-

tities to form sheaves by any known device, said grain, by means of a rake or fork O, connected in such way by bar K and lever J with a dumper H, I, *y*; that, the fork O being in the position indicated by figure 1, the teeth H will assume the position shown in the same figure; and the fork O being in the position indicated by figure 2, the teeth H will follow in the position shown in the same figure; thus the fork O throwing off effectually, at each stroke, all the grain collected on the dumper while the latter was in the position indicated in continuous lines, and the elevation of the heads *y* during the position of the dumper in figure 2—that is to say, during the throw—preventing the grain from falling from the platform on the dumper.

Claim.—Is restricted to the fingers H, arranged as described, and operated by means of the excentric M, rod K and lever J, in combination with the fork O, constructed and arranged as herein shown, namely: with a curved slot *w* through it, in which the pin or arm *x* fits, and operated by the crank P, for the purpose set forth.

No. 10,905.—Hiram Frisbee.—*Improved Lath Machine.*—Patented May 16, 1854.

The nature of this invention consists in hanging the log A, shown in dotted lines, upon centres, in a carriage which moves the length of the log backward and forward, on a frame in which revolves circular saws at right-angles to each other, for the purpose of cu ting off the lath from the log as it traverses over the saws; also, in the combination of devices for adjusting the log to the saws, so that laths or strips of any desired thickness or width may be cut from the log; and also, in revolving the log the thickness of a lath by the action of a ratchet, immediately as each strip is cut from the log.

Claim.—The combination of the movable cam-blocks I I^1, stay-lever H, ratchet-dog G, and weight J, for the purpose of successively turning and griping the log in the following manner: the ratchet-dog rotates the log the thickness of a lath as the stay-lever passes over the movable cam-blocks I I^1; on the instant the stay-lever is reversed by the action of the weight J, causing the log to be griped, and held stationary, by the point of the lever at H^1, during the process of sawing. The act of turning and griping the log takes place alternately, as the carriage traverses backward and forward.

Also, the combination of the adjustable rollers D D, and D^3 D^3, the slides D^1 D^2, and the adjusting screw E E, with the slides C C, as hereinbefore described.

Figure 1 is a transverse section of the frame.

Figure 2 is a plan of the machine.

No. 10,906.—William Stoddard.—*Improved Rotary Shingle Machine.*—Patented May 16, 1854.

This improvement consists of a wheel B, formed in halves, in each half of which are placed one riving knife and two shaving knives, and

also the springs and other apparatus, as shown in the drawings, for adjusting the same for splitting or riving and shaving shingles, by the rotary motion of the wheel in which the knives are placed.

Claim.—1st. The riving-knives *c c*, the springs J J, to which they are attached or secured, the dressing-knives D D, the bevelled flanched wheel B, when they are arranged and operated as shown and described.

2d. The arm E, placed at or near the centre of the within-described wheel B, or its mechanical equivalent, when made and used for the purpose of sustaining the shingles, while the knives D D are dressing them.

3d. The levers N and O, in combination with the springs G G, for supporting the four springs E E E E, near the periphery of the wheel B, during the dressing of the shingles.

The two figures represent perspective views of both sides of the wheel.

No. 10,907.—CHARLES A. READ.—*Improvement in Self-heating Smoothing Irons.*—Patented May 16, 1854.

This iron is composed of three parts. The bottom part, being made in the shape and of the size of an ordinary flat-iron, is perforated with a row of round holes *a*, to receive the tubes of the lamp. There is a row of holes *b b*, above those for the lamp-tubes, through which the air enters, and deflects the flame of the lamp down against the bottom, to heat it most, and the top least. The top part is provided with a rebate around the edge to fit the bottom, and is made inside so as to descend from rear to front, and is secured by pins passing through the side of the iron. The top is furnished with a handle, in the usual manner, and also has a draught-pipe or chimney *d*, in its forward end, communicating with the interior. The lamp is made semicircular, of tin or copper, for holding alcohol or other burning-fluid, and has a number of tubes projecting from the straight side of the lamp, corresponding in all respects with the round holes *a* intended to receive them.

Claims.—1st. Making the holes which supply the air to the lamp, above the holes through which the lamp-tubes are inserted; so that the air, as it enters to supply the lamp, will deflect the flame down towards or against the bottom, to heat it more rapidly and effectually than it would otherwise do, and heat the top less, substantially as described.

2d. Making the inside of the top descend gradually from rear to front, to aid in deflecting the flame down to or against the bottom, so as to heat it more effectually.

No. 10,908.—WILLIAM L. BASS.—*Improvement in Tables for Ship's Cabin.*—Patented May 16, 1854.

The object of this invention is to economise the space occupied by the large dining-tables commonly used in ships' cabins, &c., by con-

verting the same at pleasure into two arm-chairs, placed opposite to each other. And this is effected in a simple manner, by attaching to the chair a reversible back *e*, which can be changed, being fastened to the frame *a* of the chair, from an upright to a horizontal position; the seat of the chair being so connected to its supporting frame-work, by a peculiar arrangement of mechanical devices, as to allow free access to the table, and also serve as a seat to the same.

Claim.—A table for ships' cabins, &c., which is formed in sectional pieces, by the backs of two opposite rows of adjacent chairs, the said backs being sustained and operated as herein above described, and also susceptible of being reconverted into the backs of chairs, as above set forth.

No. 10,909.—Smith A. Skinner.—*Improvement in Surgical Splints.*—Patented May 16, 1854.

In this apparatus, G is a bar of iron having near its upper end several holes, *r*, *r*, *r*, *r*, into which screw *m* works, said screw being several inches in length and bearing upon its distal extremity a curved spring, or body brace, which is clothed with cushioned-straps *r* and *t*, the former to pass round the body of the patient, and the latter to pass under the perineum; E is a slide for adjusting the upper end of splint A B; and F is another slide for adjusting the lower end of said splint, and for making counter extension by means of screw R, which is turned by wheel-tread L. Foot-rest is adjustable by means of slotted bar.

Claims.—1st. The combination and arrangement of the long bar *a*, made to extend above the hips, and to have a counter extension strap applied to its upper part, the thigh and leg-rests, and the extension screw applied to the bar, the whole being substantially as specified.

Also, in combination with the long bar G, and the counter extension strap of the groin, the projecting screw arm *m*, and its body-rest, the same being for the purpose of obtaining extension in direct line of the leg as stated.

2d. The combining the connected thigh and leg rests with the bar G, by means of the two slide-rods and slides, and their set-screws, as specified; whereby the whole, the combined thigh and leg rests, may be readily and properly adjusted to any leg, whatever may be the degree of projection of the hip thereof.

The inventor disclaims thigh, leg, and foot rests upon a board extending the whole length of the extremity without means of producing extension of the thigh, and also of Liston's and Ferguson's splint.

No. 10,910.—Israel M. Hopkins.—*Improvement in Knitting Machines.*—Patented May 16, 1854.

The first part of this invention relates to certain means of causing the locking-bar to descend and lock the sinkers firmly, previously to the commencement of the retreat of the needles, and the closing of their barbs by the presser-bar; whereby, after the depressions of the thread

are made between the needles by the sinkers, the passage under the joints of the needles is more effectually secured, and the dropping of loops is more effectually prevented.

The second part of the invention relates to certain devices by which the thread is prevented running out from the bobbins, and has a slight back-drag given to it at the commencement of the laying of every new row of loops upon the needles, for the purpose of taking up the slack sometimes left in the thread when the traverse commences its return, and making a tight selvage.

Claim.—Attaching the locking bars *i i* to the same plate or head J with the presser-bar, in such manner as to allow them a limited movement, irrespective of the head, under the influence of springs *m m*, applied substantially as described; whereby the said bars are enabled to lock the jaws some time before the termination of the descent of the presser-bars to close the barbs, and hence before the commencement of the retreat of the needles, but the necessary continuation of motion of the head to bring down the presser-bars is not prevented.

Also, the combination of the spring U and the plate W attached to the traverser, and the tongues R R attached to the needle-bar; the several parts operating substantially as described, to arrest or retard the thread, or produce a back-drag, as may be required, to tighten the selvage at the commencement of each row of loops.

No. 10,911.—JOSEPH PUTNAM.—*Improvement in the Manufacture of Couplings for Clay Pipes.*—Patented May 16, 1854.

The object of this invention is the construction of the moulding-box case and its cover, in such manner as to cause a more perfect moulding and shaping of clay-pipe couplings than has been attainable by any means heretofore known, and a more perfect means of removing the excess of clay from the outside of the coupling.

The spindle E^2 rests in the centre of the semi-cylindrical mould-box A, and sustains the core, which is composed of two short cylinders H I, expanding into the conic frustra F G. The core is covered with stocking-net L, instead of common inelastic cloth; and shape is given to the exterior of the upper half of the coupling by drawing an instrument of wire, figures 3 and 4, over the mass of clay from one head, K, to the other; by which it is not only trimmed down to the height and curve of these heads, but the superfluous clay is, at the same time, divided, and falls on either side.

Claim.—The manner of making the mould, viz: of a combination of the two conic frustra, and their separation cylinder or cylinders together, and with the concave cylindrical block and end-boards, as specified, the two parts of the core being supported on a spindle that rests on the concave block, and concentric with its curved surface, as specified.

The inventor does not claim the mere use of cloth, or an inelastic fabric, to prevent adhesion of the clay to the moulding surface, but claims the employment of stocking-net, or an equivalent elastic material, for the cover or covers of the two parts or frustra of the core;

the elastic properties of such cover or covers enabling them to fit closely to the curved surface of the cone without the formation of injurious seams or indentations on the inside surface of the coupling; and, besides this, the elasticity of the cover or covers facilitates the removal of the same from the moulded article.

Also, the wire former, made substantially as specified, viz: of a curved wire or blade R, the tension-stay and cutter of wire U, and the forked stock or handle—the whole being used in the manner and for the purpose specified.

No. 10,912.—T. J. SLOAN.—*Improvement for Water-Gauge for Steam-Boilers.*—Patented May 16, 1854.

The invention consists in enclosing the shaft *c* of the float-arm *b* in an elastic extended sleeve *h*, surrounded by metallic rings, thus forming a loose but steam-tight joint.

Claim.—Connecting the float, inside the boilers or other vessel, with the indicator or other mechanism outside, by means of a flexible sleeve or sleeves, or the equivalent thereof, substantially as and for the purpose specified.

No. 10,913.—CHARLES G. SARGENT.—*Improvement in Machinery for Combing Wool.*—Patented May 16, 1854.

In this machine there is one or two rows of teeth, by one of which the wool to be combed is lapped; and these teeth are attached by sectional bars to the links of an endless chain, passing over rollers or wheels, and, in the upper part of their course, guided so as to move slowly in a straight line, to receive the fibres of wool from a feeding apparatus, thence carry it along in front of a combing apparatus, and thence to a pair of rollers, which throw off the combed fibres to form a sliver.

Claims.—Giving to the feeding apparatus the lapping motion as specified by the crank *i* and rockers *e e*, or their equivalents, for lapping the fibres of wool on the teeth of the main comb b^1, as specified.

Also, in combination with the feed-rollers *c c*, operated as specified, the employment of the lifting-rod *t*, for lifting the fibres preparatory to lapping them on the teeth of the main comb, and thus separating them, substantially as specified.

Also, in combination with the continuous chain of main comb-teeth b^1, on which the fibres are lapped, a working comb q^1, which is operated by a pecular motion, like that given to the lapping rollers, by having the said working comb q^1 attached to it, and carried by a frame operated at one end by a crank u^1 or its equivalent, and jointed to the vibrating rods or rockers S^1 S^1, as specified.

Also, in combination with the main comb-teeth b^1, and with the lapping feed-rollers and the working comb q^1, as specified, the employment of brush or brushes a^2 b^2, as described, for holding the fibres of wool, after they have been lapped on the main comb-teeth, to prevent them from being drawn out before they are combed, as described.

Also, in combination with the endless chain of comb-teeth b^1, constituting the main comb, the vibrating finger m^2, operated as described, to direct the fibres, after they have become combed, to the rollers which draw them off, and deliver them to the condensing apparatus.

Also, giving to the feed-rollers *c c* an intermittent rotary motion, as specified, that the required quantity of wool may be led forward for each lapping motion, and then stop during the pulling or separating, as specified.

Also, giving to the rollers v^2 v^2 of the condensing apparatus, which strips the fibres of wool from the teeth of the main comb, a slow vibrating motion in the direction of their axes, as specified.

No. 10,914.—GEORGE ROGERS.—*Method of Coating Metals.*—Patented May 16, 1854.

The method consists in placing one or more partitions B in the bath A, by which the opposite ends of coating metal are kept at different temperatures.

Claim.—Constructing the bath in such manner that the upper portion of the molten metal at which the article to be coated enters, is separated by a partition from that portion of the upper part of the molten metal at which the coated article emerges, whereby the flux at the two ends of the bath may be kept separate, and the metal at one end of the bath kept at a much higher heat than at the other, substantially as specified; whereby, also pulverulent matter, not a good conductor of heat, may with important advantages be employed to cover a portion of the surface of the molten metal, the remainder being covered by flux, as herein set forth.

No. 10,915.—HENRY BURT, assignor to the NEWARK PATENT HOSIERY COMPANY.—*Improvement in Knitting Machines.*—Patented May 16, 1854.

This invention consists in certain improvements in knitting machinery, being based upon and applicable to a machine of the kind for which letters patent were granted to the patentee September 23, 1843.

A description of the nature and construction of the machine would occupy too much space in the Report.

Claim.—The method of constructing the pattern-cylinder, viz: by dividing it into two parts, so as to be capable of sliding to or from each other on the supporting-shaft, whereby variations in the width of the web may be effected, but having the same pattern.

Also, combining the pattern-cylinder directly with the shifting-bar, carriages, and yarn guide, as described; whereby space is economised, and a better action in the machine produced.

Also, the improved construction of the carriage and stop-motion, by the addition of a second carriage, on which the stop-levers and yarn-guide are fixed. These in combination with the shifting-bar, as set forth.

Also, in attaching the point of the yarn-guide by a hinge, and so

shaping it that it may be pressed down between the needles to form the selvage, as described.

Also, the hook-bar H and its hooks, in combination with the needles and sinkers, substantially as set forth. No illustration.

No. 10,916.—A. GREENLEAF.—*Water-wheel.*—Patented May 16, 1854.

The detailed specification, the numerous drawings, representing almost every species of curved surfaces, together with their peculiar combination, render a satisfactory description here impracticable.

There are five devices.

The 1st and 2d cover the combination of the adjustable hinged gate K with the flume *m*.

The 3d and 4th claims refer to tapering floats H, in combination with the cuniform spiral-like surfaces O of wheel.

The last claim relates to the peculiar change of curvature given to the ends of buckets seen at V I.

No. 10,917.—LEANDER LACKEY.—*Improvement in Machines for Pegging Boots and Shoes.*—Patented May 16, 1854.

Claims.—The patentee claims the several parts of this above-described machine combined for the purpose of making boots or shoes.

1st. The hanging the jack or last-holder Y by universal joints M, so arranged as to press against points of inclined spur-wheel *r*, and held firmly at proper time by clamp *s*, or analogous device.

2d. The receiver *o*, when this is so combined with a concave guide X, in which it revolves, as to receive the peg directly as it is cut from the block, and convey it directly to the hole pierced by the awl.

3d. In combination with the revolving receiver, the awl L and punch P, when made to operate alternately through the compartments thereof, for the purpose of piercing the hole and driving the peg; it being understood that the general device of making the awl and punch act alternately with each other is not claimed, as that is not new.

4th. The revolving spur-wheels R and *r*, on which the shoe rests, and is carried at certain times the precise distances for the series of pegs, either for single or double rows.

5th. The manner of making the pegs, by cutting them on the box or hopper, as set forth, and feeding along the card by the alternate motion of a catch operating on the points of the card.

6th. The annular guide that supports the toe while the shoe is being pegged round the heel, and also supports the heel while being pegged around the toe.

7th. The waved cam C^2, for the purpose of raising and depressing the shoe to place the pegs in alternate rows.

The patentee is aware that one or more of the above-mentioned devices may be dispensed with in some kinds of work, and therefore does not claim the whole as a necessary combination; but I use the whole for common large work, reserving the right to use less or more, as required.

No. 10,918.—HEMAN B. HAMMON.—*Improvement in Ox-yokes.*—Patented May 16, 1854.

This invention consists of putting ferrule *c* upon the end of the ox-bow; fastening washer *f* to the top of the yoke, and then bringing washer *e* upon the bow, so that projection *g* fits into the branched slot of ferrule *c*; pin *i*, upon washer *f*, enters hole *h* of washer *e*, and retains the latter in place.

The inventor does not claim the ferrule and washers separate, for they are used for different purposes.

Claim.—The combination of the ferrule *c*, or its equivalent, and the washers *e* and *f*, for fastening ox-bows, as herein set forth.

No. 10,919.—DANIEL P. BALDWIN.—*Improvement in Shower-Bath.*—Patented May 18, 1854.

This bath has two reticulated trumpet-shaped discharges, G and H, which may be revolved at pleasure to direct the water upward, downward, or laterally. Pipe A supplies cold water, and pipe B supplies hot. By means of stop-cock D^1, cold water may be furnished as in figure 1; a mixture of cold and hot, as in figure 2; and also hot water alone.

Claims.—1st. The manner herein described of combining the two directors G H, and providing one of them with large and the other with small discharge-holes, and arranging them so as to be capable of being revolved when it is desired to vary the direction and quantity of the water discharged, and thereby increase or lessen its force upon the body of the bather, substantially as herein described.

2d. The manner herein described and shown of applying the three-way cock D^1 to the supply-pipes A, B, E, of the directors G H, so that warm and cold water may be supplied at the same time, and mixed and discharged together through either of the directors, or warm and cold water supplied and discharged separately, as may be desired, substantially as set forth.

No. 10,920.—LEVI DEDERICK.—*Improvement in Cotton and Hay Presses.* Patented May 16, 1854.

The nature of this invention consists in having the case or box in which the cotton or hay to be pressed is placed of rectangular form, and placed in a horizontal position, said box or case being higher than its width, so that the bale when pressed stands on end; also in a peculiar manner of fastening or securing the top and side doors of the case or box.

Claim.—The bar G hinged to one of the doors, and capable of being removed therewith from the opening, in combination with the caps *i i*, by which it is retained immediately over the ends of the two doors, effectually resisting the pressure from within, and keeping them closed during the operation of pressing.

Also, providing the caps *i i* with flanges on the interior sides, by

means of which the bar G is enabled to aid in supporting and binding together the two sides of the press during the greatest strain upon them.

No. 10,921.—GEORGE E. HIGGINS.—*Improved Fastenings for Ear-Rings.*—Patented May 16, 1854.

The object of this invention is to provide a means of connecting the drop with the knob, which shall be simple and secure, and afford greater facility for its attachment and detachment, and for the removal of the drop from the knob, while the latter is in the ear.

This is accomplished by constructing the standard A, with an interior wire *f*, of metal harder than gold, cased by an exterior tube *g* extending a part only of its length; a slot *h* is cut in the upper part of the tube on the side next the knob, in order to receive the end of the ear-wire *b*.

No. 10,922.—FRANK BAKER.—*Lathe for Irregular Forms.*—Patented May 16, 1854.

The figure represents this improvement. The two outer mandrels C G carry identical patterns *n o;* a revolving shaft *p*, having friction rollers *q*, carries the cutters also; and as the carriage A passes along, these rollers *q* follow the pattern, and, of course, the knives cut corresponding forms from the pieces n^1.

Claim.—Two patterns in combination with the tracer roller, arranged and operating as may be seen in the drawings.

No. 10,923.—BERNARD HUGHES.—*Atmospheric Trip-Hammer.*—Patented May 16, 1854.

The improvement consists in having a piston E attached to the stem D of the hammer, working in a cylinder C, open at the top and closed at bottom, with cock and valve; so that the whole or a part of the pressure of the atmosphere may be added to the weight of the hammer.

No. 10,924.—C. M. DABOLL.—*Improved Carpenter's Brace.*—Patented May 16, 1854.

The claim allowed is to the securing and detaching the bit in and from the socket of the brace by means of the eccentric-catch D and the inclined side *b* of the notch in the shank of the bit B, operating in such a manner that any force exerted to withdraw the bit will bind it tighter in its place without straining said catch, and by which a slight pressure on the thumb-lever C, combined with the catch, will release its hold upon the bit.

No. 10,925.—WARD EATON.—*Machine for Cutting Glaziers' Points.*—Patented May 16, 1854.

The claim allowed is to the combination of a partially serrated or indented and straight cutter L, having a reciprocating vertical motion, with a stationary blade N, so that the serrated part of the cutter L shall cut out one half of the sheet in points, and at the same time form two of the three sides of the remaining points of the sheet, which are cut therefrom by the straight cutter, and thus cut up the entire sheet without waste; this being claimed only when said cutting-edges are so inclined to each other as but one point of the series cut from the sheet shall be cut off at a time, which prevents their warping or bending.

No. 10,926.—CHARLES H. DANA.—*Improvement in Potato Diggers.*—Patented May 16, 1854.

The gist of this invention consists in arranging on a two-wheeled truck, and immediately behind a hoe C, a series of radial teeth *e e*, on an axis *b*, revolving parallel with that of the truck; upon which teeth the tubers raised by the hoe are thrown by the momentum of the progressing machine, and thus freed from the adhering earth, which falls through between the teeth.

Claim.—The revolving separator D, constructed and operated substantially as described, for the purpose of breaking up the raised furrow-slice, and separating the potatoes therefrom.

No. 10,927.—JAMES HULTS.—*Improvement in Gun Locks.*—Patented May 16, 1854.

The invention consists in the combination of the tumbler *d* of sear *c* with the jointed levers *f* and *k* and the spring *b*, as described and illustrated; so that by the set-screw *j*, and through its action upon the jointed levers *f* and *k*, the sear *c*, and the tumbler *d*, the cock may be detached from its cocked position, and the gun fired with greater or less exercise of power, as may be desirable; thus deriving all the advantages of a gun with two or more triggers, while but one is used.

No. 10,928.—N. W. CILLY.—*Hanging Gates, &c.*—Patented May 16, 1854.

The construction and application to gates, &c., of the parallel movement, well known to geometricians, is the substance of this invention. The figures sufficiently illustrate the present application.

Claim.—The method of suspending gates or other structures to bracing levers, jointed to each other and to the gate or other structure, and to fixed works, substantially as specified.

No. 10,929.—WILLIAM H. MITCHEL.—*Improvement in Machinery for Composing Type.*—Patented May 16, 1854.

This is an improvement on a patent granted to the inventor on the 30th of August, 1853, and applies to the parts for dropping the type from the conductors *g*, therein shown, on to the belts *m*, which convey the type to the diagonal belt *o* that carries it to the composing apparatus, &c., and also comprises the invention of the wheel (figures 1 and 2) for setting up or composing type in line.

Figure 1 is a sectional elevation.

Figure 2 is a plan of the composing wheel.

Figure 3 is an end view of the parts for dropping one type at a time.

Figure 4 is a plan of one of the finger-keys detached.

No. 10,930.—JEREMIAH PECK.—*Improvement in Fire-Arms.*—Patented May 16, 1854.

The substance of this invention consists in revolving the chambered cylinder by means of a jointed lever *g h i*, acting in recesses in the front end of the cylinder, and worked by a thumb-piece *r* on the back end of the lever, by pressing it with the thumb immediately before pulling the trigger.

Also, in so constructing and arranging the rear end of the lever that it will form a complete protection against accidental discharges.

Also, in the manner of constructing and locating the spring-shield F, so as to serve the double purpose of protecting the caps and of preventing the recoil of the cylinder B.

No. 10,931.—LYMAN SCOTT.—*Improvement in Portable Mills.*—Patented May 16, 1854.

The nature of this invention consists in spreading the points where the fine grinding is done by the alternate shallow and deep sections on the burr, for the purpose of preventing a surfeiting or clogging of the grain at any one point; also in the method of supporting the shell and adjusting the burr therein.

In the figure, A is the shell, B the burr. On the outside of the shell are cast the sockets C into which the grooved legs D are secured. E is the bridge-tree, made adjustable by the screw-rods *a a*. The arms of the bridge-tree fit into the grooves of the legs, and are guided therein in adjusting the burr. Alternate sections of deep and shallow grooves are made on the burr, as seen at *e e*, causing the meal-making line to be scattered over more of the surface of the burr.

Claim.—The alternate deep and shallow sections of furrows upon the main grinding-surface of the burr, for the purpose of distributing the material over said surface, and preventing a surfeit or clogging upon any one point of said grinding-surface, substantially as described.

Also, the method of supporting the shell and adjusting the burr therein, by means of the lower bridge-tree, grooved legs, sockets, and adjusting screw-rods, when said legs serve the double purpose of sup-

ports to the shell and guides to the bridge-tree, substantially as described.

No. 10,932.—LINUS STEWART.—*Saw.*—Patented May 16, 1854.

Claim.—The construction of saw-teeth, viz: each tooth shall project beyond the next below it a distance equal to the depth it is intended to cut, each tooth having its forward face or sole vertical or parallel to the corresponding faces or soles of the other teeth.

No. 10,933.—H. S. TAYLOR.—*Improved Machine for Paging Books.*—Patented May 16, 1854.

It consists in a revolving disk, or cylinder, F, in the periphery of which are secured common printing types *a*, which may be taken out and replaced by others when desired. The type-holder is constructed of two parts, one of which, G, is fixed to the shaft D, and F is held to it by the buttons *b*.

In operation, the leaf of the book to be printed is placed between the fingers *r*, over the platen *p*; the treadle K is depressed, the platen *p* is raised, and the impression is made. By the reaction of the treadle, under the influence of the spring L, the shaft D is turned sufficiently to bring a new set of types opposite the platen.

No. 10,934.—WILLIAM H. TOWERS.—*Improvement in Guitars.*—Patented May 16, 1854.

The improvement consists in passing the strings of an ordinary guitar through openings in the pins A F E B G D, fastening them at their lower ends, and in lengthening the pins G D, so as to touch and press against the bottom-board of the guitar, to cause them to act as sounding-posts, in addition to being hold-fasts for the strings.

No. 10,935.—WILLIAM H. STREET.—*Improved mode of attaching Blankets to Cylinders for Printing Presses.*—Patented May 16, 1854.

Claim.—Attaching one end of the blanket to the cylinder by a row of pins *d*, arranged within the cylinder on one side of the opening C, which receives the gripper-shaft, and the other end to a bar G, provided with a row of teeth *e*, which occupies a position within the cylinder, and has a screw E to draw it inwards to tighten the blanket *b*.

No. 10,938.—MATTHEW SPEAR.—*Improved Mitre Box.*—Patented May 16, 1854.

The nature of this invention consists in the arrangement of two supporters connected at one extremity, so as to turn about a common pivot with the saw-guide; the outer extremities of the supporters and saw-guide being connected by suitable mechanism, so that the guide shall

bisect all angles which may be contained between the faces of the supporters in the several positions in which they may be placed; also, in a side adjustment of the saw-guide, by which angles 90° and under, with the plane of the supporters, may be cut on lumber laid on said supporters and across the saw-guide.

Figure 1 is a plan of the machine; figure 2 is a vertical section.

Claim.—The two supporters, or lumber-bearers, *a* a^1, connected and turning about a common centre, in common with the saw-guide *d*, attached to the same pivot, and so connected by mechanism with said supporters as to cause it at all times to bisect the angle at which the supporters may be set.

Also, the turning of the saw-guide from its vertical position, as herein set forth, for cutting any desired angle with the plane of the lumber-supporters, substantially as specified.

No. 10,937.—Isaac W. Little.—*Improvement in Ox-Yokes.*—Patented May 16, 1854.

This invention consists in making the yokes of two parts A B, connected with bolts C D and clasp E, and strengthened by P Q R and S, in order to adjust the length of the yoke, by additional holes for C D, and extending the chains, and at the same time make it both strong and tight; upon screw *a* is a nut I, to tighten the chains.

Claim.—Making the yoke in two parts A B, scarfed, bolted, and confined together, as set forth, and combining with them the sustaining chains, the chain-holder K, and the stirrup screw and nut—all substantially as specified.

No. 10,938.—Peter S. Howes.—*Improvement in Self-heating Smoothing-Irons.*—Patented May 16, 1854.

This smoothing-iron, like others, consists of a box A, formed with two smoothing faces *a b*, and connected to a handle B by journals C D, that project from the ends of the box, and extend through bearings made in the lower parts of the vertical slides of the handle. The journal C is made tubular, to admit the wick-tube *c* of the spirit-lamp E to pass into it. The journal D extends through and beyond the handle, and has a turning-lever N jointed to it, so as to be capable of being turned in an arc of one hundred and eighty degrees, in a vertical plane made to pass through the axial line of the two journals. This lever, when pressed up against the handle, is made to enter a recess *f* formed in the handle, and to press upon a spring-catch *h*. This catch serves to hold the lever in place when standing upward. The wick-tube *c* of the lamp is made to lead out of a chamber H in tube I, extending up from the bottom of the lamp, and is closed at its bottom and made open at its top. The wick *g* is led into the chamber H, up and in contact with a tube of cloth or capillary cover h^1 closely fitting upon the tube I, and extending down to a shoulder K formed around tube I, and in the body of the lamp. A cylindrical air-vessel K, closely fitting the tubular cloth and tube I, is attached to a rod L extending down

through the filling-cap M of the lamp. The object of the air-vessel K and tube I is to prevent the swash of the alcohol in the lamp during the process of ironing.

The patentee does not claim the combination of a rotary box, a supporting bail or handle, and a spirit-lamp, the box being provided with two smoothing-faces or surfaces of flats, and made to turn around within the handle, so as to bring either of them downwards, after it has been heated by the flame of the wick of the spirit-lamp.

Claim.—The mode of preventing the swashing of the alcohol in the lamp, for causing too great or sudden a flowage of the alcohol through the wick; the air-vessel K, in combination with the tube I, its seat, and the capillary covering, the same being applied together and in the reservoir of the lamp, and to the wick thereof, and made to operate substantially as specified.

No. 10,939.—D. M. SMITH.—*Lathe-Dog.*—Patented May 16, 1854.

This device clamps the material E to be turned. The screw D abuts against the dog A, thereby closing it and the double stirrup B B^1 firmly against the piece E.

I *claim* combining the stirrup to the eye of the lathe-dog, so that the eye part of the dog shall be made to extend through into the stirrup, and the male screws of the dog be made to screw through the stirrup and against the end of the dog, as stated. I also claim to combine a cross-bar or rod with the tines of the stirrup, so that the said cross-bar shall pass through the eye of the stirrup, and serve to keep the parts together, or from entirely separating, when not in use, as specified.

No. 10,940.—P. B. TYLER.—*Saws.*—Patented May 16, 1854.

This improvement consists in the particular method of fitting cutting-nibs *d* to the saw, so that, when desirable, they may be removed, and others inserted and screwed to the plate.

Claim.—The improved mode of making and fitting each tooth, the cutting-nib of it being made so as not only to embrace a rib made in the teeth or body of the saw, but to rest in an angular notch formed at the front of the rib, the nib being secured in place by rivets.

No. 10,941.—JOSEPH EDMONDSON and CALEB HAWORTH, executors of THOMAS EDMONDSON, deceased.—*Improved Case for holding Railway and other Tickets.*—Patented May 16, 1854.

The figures represent two rows of tubes or boxes *t u* for containing tickets, used principally at railway stations. Each tube is formed of the back plate t^1, partitions t^2, front plate t^3, and bottom plate t^4, the two latter being adjustable and somewhat separated, to allow the ticket-clerk to draw the lowest ticket out of the tube, when required. In the figure, the lowest ticket is represented as partly drawn out. The boards *x* and x^1 are made to contain half tickets for children, &c. The

boards x^1 are hinged to the back plates, and are raised up when it is necessary to put a fresh supply of tickets in the tubes. The swivel-boards are furnished with a piece of slate for the clerk to enter the number of the last ticket upon, and the back of the board is covered with paper for making any memorandum upon. The length of the tubes *t u*, and the number of them, must be regulated according to the quantity and different kinds of tickets required at the station where the case is used.

No. 10,942.—Lewis W. Leeds and R. Morris Smith.—*Hydraulic Heater for Warming Buildings.*—Patented May 16, 1854.

In the figure, A represents the heater, B is the fire-chamber, D the ash-pit, E E E water-spaces extending around the tubes, fire-chamber, and smoke-pipe *b*; F F are air-pipes at the rear of B, open at top and bottom of the heater; F^1 F^1 are pipes like the others, but placed near the inside wall of the fire-chamber. The cold air is received at the lower portion of the heater, and passes up and through the numerous air-tubes F F, F^1 F^1 F^1, I I, and around the sides of furnace.

Claim.—The arrangement of air-tubes F F, F^1 F^1, forming a perforated chest A, containing the water to be heated, in connection with the fire-chambers B therein, thus making a compact, portable hot-water apparatus, of short circulation and efficient action, at a greatly reduced cost, in the manner set forth.

No. 10,943.—Edward Brown.—*Improved Machine for Making Hinges.* Patented May, 1854.

This invention consists in providing devices furnished with feeding-ways, into which the skeleton hinges, previously cut to the required form, are placed, and then introduced one by one, by means of a feeding-slide, before dies, where the knuckles are turned by means of punches, and the finished hinges then ejected from the machine.

Claims.—1. To the slides G G^1, regulated by set-screws.

2. The eccentric rods E E^1, sliding within the hollow rods F F^1, and connected with the slides G G^1.

3. The sliding-punches J J^1, with adjusting screws.

4. The sliding-gauge O, with its longitudinal motion and set-screws, for the purpose of securing the hinges while turning the knuckle.

5. The fast-gauge S, with the preventer *r*.

6. The slide P, with the catches *v* v^1, and the spring-catches *w* w^1.

7. The gauge M, in combination with the preventer *r*, for the purpose of preventing the hinge from returning with the feeding-slide; the whole being combined substantially as set forth.

No. 10,944.—Edmund H. Graham, assignor to E. H. Graham and A. Wheeler.—*Improvement in Magazine Guns.*—Patented May 16, 1854.

The nature of this invention consists in the combination of the slide cut-off F G and the perforated plate E with the barrel and magazine,

arranged as specified, so that a rotary charge-receiver and its attendant evils may be dispensed with, and yet the advantages of the arrangement of two series of powder and ball chambers in concentric circles on the side of the gun, and out of the sight-range, be retained; the same contrivance being but little liable to be rendered foul by the smoke, or any gases arising from the explosion of the charges.

No. 10,945.—JOSEPH BIRCH.—*Improvement in constructing Ships for safety and escape.*—Patented May 23, 1854.

This invention consists in making the after part of the deck U separate from the main part of the vessel, and so arranged that it may be detached and form a life-boat.

No. 10,946.—P. TEALE and C. TYLER, assignors to W. P. CRESSON & Co.—*Lathe for Turning Hollow Ware.*—Patented May 23, 1854. In England April 3, 1853.

The improvements consist in certain means of holding and controlling the movements of the turning-tool, whereby it is made to accommodate itself to irregularities in the surface of the article, whilst no more of the metal is to be turned off than is indispensable to the removal of the crust on the surface of the casting.

Claims.—1. To the rest *m*, with or without a friction-roller *n*, attached to or combined with a swinging turning-tool *k*, so as to move therewith, and bear on the surface on which the tool is operating, for the purpose of keeping the tool in a suitable position in relation to the surface that is being turned, and furnishing a proper rest therefor—in all its movements to follow the deviation of the motion of the surface from a true circle.

2. Hanging the tool in a frame *o o*, which is left free to vibrate, and keeping it in contact with the work by a spring or analogous device, while the axis of the work is fixed, or has its motion limited; or, what is equivalent, hanging or supporting the axis of the work in such a way as to allow it to vibrate freely, but keeping it in contact with the tool by a spring or analogous device, while the tool is stationary, for the purpose of keeping the tool and work in proper contact, but allowing them to yield to any want of truth in the surface of the work, and thereby cause the tool to take about the same depth of cut on all parts of the surface.

No. 10,947.—JOSEPH EDMONDSON and CALEB HAWORTH, executors of THOMAS EDMONDSON, deceased.—*Improved Machine for Printing Railway and other Tickets.*—Patented May 23, 1854.

The machinery which forms the subject of this invention is intended to print on each of a number of tickets the same names of places of departure and arrival, and to number them consecutively.

The blank tickets are placed in a feeding-tube *a*, from which they are fed one by one to a horizontal table under a type-box containing

the type, the impression of which is repeated on all the tickets; the type-box *e* is raised and lowered to receive the ink from rollers h^1, and to print the tickets, which are held in place by the guide-rails *g*, which extend from the feeding-tube *a* to the receiving-tube *k*.

The consecutive numbers are printed on the tickets by the numbering-wheels *n o*, which have the numbers engraved on their circumferences. The wheel *n* prints the units and tens, beginning at 0 and going up progressively to 99; while the wheel *o*, which impresses the hundreds and thousands, is provided with a blank and with figures beginning at 1, and continuing progressively to 99, substantially as herein described.

No. 10,948.—ELON A. LEE.—*Improved Piano-forte Action.*—Patented May 23, 1854.

Claim.—The arrangement of the adjusting-screw *e* and button *f*, in such a manner that, instead of acting against the fixed arm *a* of the common jack, it is brought to act on a wire placed in the same manner with the wire *g* or *m*, with its button as represented; so that as the hammer is raised, this wire by itself, or by means of its button moving in connexion with the under hammer, assists, by pressing against the button of the adjusting screw, to throw off the fly *c* of the jack to the recess *j* of the under hammer at the moment the hammer reaches the string, thus giving a free hopping motion to the hammer without diminishing the force of its blow against the string.

By the combination of the connectors and supporters, the usual hammer-rails and back-catchers are dispensed with.

No. 10,949.—G. B. TURNER.—*Improvement in Smut Machines.*—Patented May 23, 1854.

The invention is confined to the special construction of the zigzag passage *c b* b^1 *d* of smut and grain, and the concentric return of the grain towards the shaft F, while the smut and dirt pass out through the inclined screen-bottom J, the chaff to be separated finally from the grain by the blast in spout D.

Claim.—The stationary and rotating scouring plates G G and I I, inverted screens J J, and the blast-spout D, constructed and operated in the manner and for the purpose substantially as shown and described.

No. 10,950.—A. N. NEWTON.—*Improved Primer for Fire-arms.*—Patented May 23, 1854.

This invention consists in the peculiar arrangement and combination of the capping lever G with the cock and the rotating cap-cylinder F, so that the elastic fingers *k* k^1 of the said lever, picking a cap from the cap-cylinder during each backward movement of the cock, conveys to the nipple and holds it thereon; also removes the exploded cap

from the nipple preparatory to a new cap being put thereon; all of which is done while the gun is being cocked.

No. 10,951.—Lewis A. Miles.—*Improved Puppet-Valve for Pumps.*—Patented May 23, 1854.

The claim fully explains the nature of the invention.

Claim.—The valve, united by a double hinge ff^2 to the chamber, in combination with tongue f^2, which, projecting from the pivot f, bears against the top of the valve in rising, and insures its even action upon the seat in falling, in combination or otherwise with the closing spring *k*.

No. 10,952.—Ransom P. Adams.—*Improved Excavator for Fence-Posts.*—Patented May 23, 1854.

Claim.—The arrangement of the drill-gearing, the several parts of which are designated in the drawing by the letters *k*, *l*, *m*, *n*, *q*, *t t*, *v*, *w*, *x*, *y*, *z z*, and clutch *h*, upon and within a frame *o o*, pivoted to and adjustable upon the sliding and adjustable platform *u*, adjustable upon and pivoted to a fixed frame *e* upon a travelling carriage.

Figure 1 is a side elevation of the machine.

Figure 2 is a front view of the same.

No. 10,953.—Henry T. Anthony and Frank Phœbus.—*Improved Apparatus for the Manufacture of Daguerreotype Cases, &c.*—Patented May 23, 1854.

The invention consists of an improved machine for making the cushion for daguerreotype, jewelry, and like cases. The operation may be understood as follows: a square of embossed velvet is first laid upon the block B, figure 2; the clamping pieces *b* lying over on A. The velvet is cut large enough to allow of being lapped over and turned on the opposite side of the paste-board. The space formed by the sides of the clamps *b*, however, is only as large as the square of the finished cushion; consequently the edges are bent up, and lie against the clamps, as seen at *c*. A bit of cotton wadding, or other proper material for stuffing the cushion, is next laid on the velvet; a square of paste-board E comes next. This has had the edges previously prepared with glue or paste for fastening on the velvet after the edges are turned over. A follower D, with a handle, is then put on the paste-board, and the block B forced down into the cavity *a*. This throws over all the four clamping pieces, each piece of the clamp turning down upon the paste-board that edge of the velvet which rested against it, from the position shown in fig. 2 to the position shown in fig. 1.

On taking off the follower D, the block B is forced up by the springs beneath, the clamps fall open, and the cushion is taken out complete.

No. 10,954.—ISAAC BABBIT.—*Improvement in Metallic Hones.*—Patented May 23, 1854.

The claim of the inventor fully sets forth the nature of this improvement.

Claim.—Making the grinding surface of hones for sharpening razors convex, or of portions of the surface of a sphere, for the purpose of keeping the edge of the razor always thin, without at any time injuring it, even if carelessly used.

No. 10,955.—HIRAM BALDWIN.—*Improved Ratchet Lever.*—Patented May 23, 1854.

In the figure, *a* is the lever, *b* is a false handle secured to the lever by the fulcrum pin *f f*, and, passing down on each side of the lever, encircles it at the part marked *x*, in such manner as to allow the lower end of the handle to play forward and back about ¾ of an inch; *c c* are dogs or catches attached to the lever by the fulcrum pins *g g*.

Claim.—The application of a dog and ratchet to any moving lever or wheel, in such manner that the usual application of the moving power to the lever or wheel simultaneously lifts the tooth of the dog from the ratchet on the side to which the lever or wheel is to be moved, or the removal of the power allows it to fall back in its place, rendering the lever or wheel immovable, except in the manner described.

Also, the application of this invention not only to the moving levers of machinery generally, but as also applicable to the securing of ships' tillers or rudders, or to any other like purpose.

No. 10,956.—JOHN BEACH.—*Improvement in Cheese Hoops.*—Patented May 23, 1854.

The object of this invention is to provide a convenient and durable fastening for cheese hoops.

The hoops are constructed in halves, A and B, and hinged together on one side, the fastening being applied at the other side. To the end of one of the halves is hinged a hasp *b*, with a slot which clasps over a small ratchet wheel *c*, connected at a point near the centre of the opposite half of the hoop by projecting ears *d*; the hasp being pressed down over the ratchet wheel below the centre thereof, thus preventing any tendency of the hasp to open during the operation of pressing, while it can be easily opened or shut when necessary.

No. 10,957.—ALFRED T. CLARK.—*Improved Sash Balance.*—Patented May 23, 1854.

This invention consists in the combination and arrangement of the pulleys and cords with the balanced sashes, by means of which the lower sash rises double the distance that the upper sash descends, and thereby leaves a wider space open at the bottom than at the top of the window.

No. 10,958.—Henry A. Chase.—*Improvement in Counterpoise to Cast Locomotive Wheels.*—Patented May 23, 1854.

Claim.—Casting the counterbalance D upon the inner face of the tread C of the wheel, and independent of the two side-plates A A forming the wheel; this method allowing all the parts of the wheel to expand or contract independent of the counterbalance, and the counterbalance itself to expand to any desired extent without exerting any strain on the wheel during the casting or chilling process.

No. 10,959.—James Curtis.—*Improved Windmill.*—Patented May 23, 1854.

The nature of this improvement consists in the manner of hanging the sails upon one shaft, so that when one sail of a pair turns to the wind, its fellow shall, by the partial turning of their common shaft, turn edgewise, to prevent resistance to the wind, and aid its fellow in coming to the same position; and in the hollow bearings upon which the sails turn, so that the lines by which they are reefed may pass through these bearings.

Figure 1, is a perspective view of this improved windmill; and figure 2, a section through one of the hollow bearings. A is a hollow shaft through the openings in which the cords *i* pass for reefing and furling the sails. F F^1 are sails attached to the extreme ends of a common shaft G, so that it shall turn with the sails; *a a a a* is the metallic frame-work of the sails without rods *b*, having eyes *c* passing across each. H H H H serve the double purpose of braces and guides to the sail-frame, *d d d d* are hollow bearings to which the sail-frames are pivoted, and *e e e e* are hollow bearings upon the frames. I is a continuation of the shaft G. The cords are indicated by dotted lines.

Claim.—So hanging the sets of sails upon one shaft extending both ways from the centre, that when one sail of the pair turns to the wind, its fellow shall, by the partial turning of the shaft, turn edgewise to prevent resistance.

Also, hanging the sail-frames on hollow bearings in combination with the sails and lines, for the purpose of reefing and furling the sails at pleasure while the wind-wheel is in motion.

No. 10,960.—Elias Davis.—*Improvement in Self-acting Power-Press.*—Patented May 23, 1854.

The nature of this invention consists in so arranging a series of horizontal and vertical knuckle-joint levers C C and D D, below the screw I, and bed-plate J, in combination with the peculiar manner of constructing and operating the press, that a progressive and powerful upward pressure, in a straight line, will be exerted upon the article being pressed, by means of its gravity and that of the movable portion of the press.

Claim.—The peculiar arrangement of the horizontal levers C C, vertical levers D D and G G, below the screw and bed plate, in combina-

tion with the manner described in specification of constructing and operating the press, whereby an accumulative upward pressure, in a straight line, can be exerted upon the article being pressed, by reason of its gravity and that of the moving portion of the press, substantially as set forth and specified.

No. 10,961.—LORING DANFORTH.—*Improved Machine for Making Book-Covers.*—Patented May 23, 1854.

The nature of the invention consists in combining a pair of folders A and B, having two distinct movements, the edge of one being the centre of motion of the other, so as to produce a perpendicular and parallel motion in quick succession.

The book-cover is placed upon the surface D, which is adjusted by the screw G, and the edge of the cover is made to rest on the folders A B, and by the connecting machinery the lifter C is elevated until the surface of the folder B is perpendicular to the bed-plate D, and against the edge of the book-cover L, when the work is completed by the further pressure of the treadle.

No. 10,962.—JOHN P. HAYES.—*Hot-air Furnace.*— Patented May 23, 1854.

In the drawing, A represents a fire-chamber, having in the upper part a series of radial chambers *b c* are two rows of hot-air tubes, communicating with the fire-chamber and with the passages B C. *d d* are hot-air tubes connecting chambers D and E. The chamber E at the upper ends of the tubes *d*, and the chamber C, at the upper ends of the tubes *c*, are isolated. The chamber D communicates with the fire-chamber through the tubes *e f*. The chamber B communicates with the smoke-pipe G, by means of a pipe H provided with a damper. I is a hot-air tube, closed at top. J is a tube, terminated by a bulb K at one extremity; the object of the tube is to supply air to the furnace.

Claim.—The general construction of the furnace, as shown and described in the body of the specifications.

No. 10,963.—AMOS JACOBS.—*Feed-water Apparatus.*—Patented May 23, 1854.

The invention consists in the arrangement of the reservoir D, counterpoise I, and valve K, in such manner that the excess of feed-water operates to regulate the supply, shutting off the supply; and while the pump continues in operation, the excess is returned over and over to boiler.

No. 10,964.—JOHN MCMULLEN.—*Preventing Incrustation in Steam-Boilers.*—Patented May 23, 1854.

The claim allowed is for the agitating of the water in steam-boilers, and preventing incrustation of the same, by the action of the spirals ',

coiled around the bars *e*, attached to the arms *c*, radiating from the shaft *a*, having an oscillatory rotary motion; and by the spirals *m*, coiled around the tubes B, having a longitudinal motion, as herein described.

No. 10,965.—JOHN MYERS and ROBERT G. EUNSON.—*Improved Machine for Sawing Thin Boards.*—Patented May 23, 1854.

This machine is designed for sawing lumber into thin stuff, such as is used for the backs of mirrors, picture-frames, &c.

Claim.—The employment, or use, of the deflecting plates E E, one or both, placed at the sides of the saw, and for the purpose of preventing the sawed stuff from bearing against the sides of the saw, and expanding the saw-kerf; and also for the purpose of allowing a thin veneer-saw to be stiffened by plates D, one or two, as desired.

Also, the employment or use of the clamps I I, arranged as herein shown, or in an equivalent way, so as to have a lateral elastic movement, independent of the roller-beds to which said clamps are attached, for the purpose of compensating for the varying thickness of different pieces of stuff, and keeping them in a proper relative position to the saw.

Also, the knives or cutters O O, placed in the roller-beds F F, and arranged substantially as shown and described, for the purposes set forth.

Also, the employment of an adjustable bed F, with clamps as described, in combination with the saw *c*, when the saw has a stiffening plate E, in line with said bed, by which the stiffened or rounded side of the saw is made the "line side."

No. 10,966.—JAMES PIGOT.—*Improved Apparatus for Making Palliasses.*—Patented May 23, 1854.

This invention is for the purpose of making palliasses of variable sizes, &c. It consists of a box with two sides, A B; A being stationary, while B is made adjustable, and secured by the bolts D D: both sides are perforated with holes *f*, of sufficient size to pass the twine and tufts to secure the palliasses at a uniform thickness. E and F represent the bottom and one end of the frame, adjustable by bolts *d e* and *m m*, which pass through holes *n h*, allowing of variation for size.

No. 10,967.—THOMAS S. STEADMAN.—*Improvement in Clover Harvesters.*—Patented May 23, 1854.

The invention consists in the arrangement of a series of knives *t t*, and parallel with them of a rake S, on the same frame, I H, the latter being vibrated by gearing, in such way that the clover-heads, passing, as the machine proceeds, between the comb-fingers *e e*, are cut off by the knives *t t*, and thrown back at every vibration of the frame, and pushed out of the way and towards the hind part of the platform at every subsequent vibration.

Claims.—1st. The arrangement of the cutters, in combination with the comb, operating in the manner and for the purposes described.

2d. The rake S, in combination with the cutters, as described.

No. 10,968.—LEWIS C. SUGETT.—*Improvement in Proccss for Treating Hemp.*—Patented May 23, 1854.

The improvement refers to picking the hemp seven to ten days before ripening, its toughness being at its maximum about this time; the immersing thereof, after the usual mechanical treatment, in a solution of common salt, at about 70° Fahrenheit, during six hours, and, when the further chemical treatment is completed, in the treatment thereof with tar, or equivalent, previous to manufacturing it into twine or cordage; the whole for the alleged purpose of making it softer, stronger, more pliable, and more durable, and at the same time cheaper than under any other treatment.

Claims.—1st. The application of common salt, or other saline substance, to the steep-water, in order to effect the removal and separation of the gum at the most advantageous condition of the lint or harl, in regard to toughness and pliancy, and before the induration of the gum about the fibres, without endangering the strength of the latter by decay.

2d. The saturation of the fibre and expulsion of its moisture, by immersion in boiling tar, pitch, or oil. for the purpose of more thorough and intimate application of the preserving substance to the fibres, preliminary to their conversion into twine or cordage. No illustration.

No. 10,969.—JOSEPH C. STRODE.—*Improved Hydraulic Ram.*—Patented May 23, 1854.

This improvement consists in carrying a pipe C C C from the upper valve-seat of the puppet-valve to the bottom of the air-chamber, for the purpose of transferring the shock produced by the rising of the puppet-valve to the air-chamber; and also in placing a series of short vertical tubes, E E E E, extending from the upper valve-seat of the puppet-valve, and which are open at their upper extremity to the external air, for the purpose of preventing the formation of a partial vacuum by the descent of the puppet-valve.

Claim.—The arrangement of the tube C C C, in combination with the upper part of the puppet-valve chamber, and with the air-chamber B; and the arrangement of the tubes E E E, in combination with the top of the puppet-valve chamber, in the manner and for the purpose described.

Figure 1 is a central vertical longitudinal section of the same.

Figure 2 is a plan of the top of the puppet-valve chamber.

No. 10,970.—R. L. WRIGHT.—*Improved Tire-Bender.*—Patented May 23, 1854.

Claim.—The adjustable spur-wheel *c*, with the rising and falling roller-shaft of the wheel F, and the concave bed, for the purpose of bending tire of variable sizes in the same machine.

No. 10,971.—R. and T. WINANS.—*Improvement in Locomotive Tender, for Feeding the Furnaces of Locomotive Engines.*—Patented May 23; antedated May 9, 1854.

Claim.—The tender, with an upper, G, and a lower, P, platform, in connexion with and for the purpose of feeding with greater convenience the furnace of a locomotive steam-engine having upper and lower feed-holes.

No. 10,972.—THOMAS W. BROWN, assignor to WILLIAM M. MEAD.—*Improvement in Button-hole Cutters.*—Patented May 23, 1854.

This instrument consists of two levers, constructed and hinged like those of a common pair of scissors. The end of the lower lever *c* is provided with a cloth-rest D, which has a scale formed on its upper surface, by which the edge of cutting-knife E can be adjusted to cut any length of button-hole desired. There is an adjusting screw N, passing down through the upper lever B, at the rear end of the knife, with a small circular cutter formed on its lower end, which cuts a circular hole at the end of the button-hole, while the knife, the edge of which stands at an acute angle with the cloth-rest, is performing its office.

Claim.—The combination and arrangement of the angular knife, or knife-edge, the cloth-rest, and adjusting screw, substantially as described, and so as to operate together, as specified.

Also, the combining a tubular cutter directly with the adjusting-screw, and so that it may perform the functions of a cutter and stop, essentially as specified.

No. 10,973.—JOHN MANSURE, assignor to FARR & THOMPSON.—*Improved Bracelet Clasp.*—Patented May 23, 1854.

The nature of this invention relates to the method of fastening the clasp, when applied to bracelets, &c., and to a device for preventing the clasp from slipping to one side, or, in other words, holding it in proper position. The first is accomplished by two spring-bars *b b*, hinged to the plate *a*, and catching into the slot *e*. To the cut ring *d*, between the bars, is secured a spring-bar *o*, which has a loop or projection *r* on its end for the purpose, when the armlet is closed, of pressing against or catching into the material embraced within the armlet to prevent its slipping to either side.

No. 10,974.—Isaac M. Singer.—*Improvement in Sewing-Machine.*—Patented May 30, 1854.

A description of this invention would occupy too much space in the report.

Claim.—The method of forming a seam with one thread, by carrying the thread through the cloth or material with the needle, and forming the thread into a loop, and at the next passage of the needle forming another loop, which is drawn through the first or previously-formed loop.

Also, the employment of lateral pressure, whether by a cam, a lever, or their equivalents, to act against and in combination with the needle, at or near the end of its perforating motion, and to insure the proper position of the needle, as described.

Also, in combination with a needle for perforating the substance to be sewed or stitched, and carrying the thread through it; a looping apparatus to form a loop at each perforation of the needle, and consecutively liberating the previously-formed loop over the one last formed, to effect the concatenation of the stitches, as described.

Also, the looping apparatus, with a recess into which the thread is drawn to form a loop, or its equivalent, in combination with the lever, or its equivalent, for alternately opening the recess to receive the thread to form the loop, and closing it to shut in the last-formed loop, and discharging the previously-formed loop over the one last formed.

Also, giving a positive motion to the spring yarn-guide, through which the thread passes from the tension apparatus to the needle, by combining therewith the two bridles, or their equivalents, and the needle-carrier, or some equivalent moving part of the machine, substantially as specified; the carrier forcing up the said spring arm-guide to the limit governed by the fixed bridle, and the movable bridle forcing it down to make the slack, as described.

Also, the method of feeding the cloth or other substance to the needle for the progress of the seam by means of the foot or pad, which holds it to the table, substantially as specified; by means of which the cloth or other substance can be turned on the needle as its axis while the needle is in it, and the foot or pad is lifted up preparatory to the feed-motion, as set forth. No illustration.

No. 10,975.—Isaac M. Singer.—*Improvement in Sewing-Machine.*—Patented May 30, 1854.

The first part of this invention consists in the method of feeding the cloth with a view to render the operation efficient and cheap, whilst it can be adjusted to regulate the length of the stitches.

The cloth is held by a pressure pad on the periphery of the feeding-wheel, which is roughened or formed with minute teeth to bite sufficiently to move the cloth. The nature of this part of the invention consists in giving an intermittent feeding-motion to the said wheel by means of a cord or catgut, or its equivalent, fitted to a groove in the periphery of said wheel; one end of said cord being attached to a spring connected with the arm of a rock-shaft, with a set-screw interposed to

regulate the length of the stitches, and the other end of it attached to a reaction spring attached to a frame or to a permanent bracket, and resting thereon at a given and positive tension after drawing back the cord, so that, when the cord is pulled by the arm of the rock-shaft to give the feed-motion, the said cord shall be drawn to a tension equal to that of the reaction spring when resting on the bracket, before the reaction spring will yield to permit the feed-motion; when this method of imparting the feed-motion is combined with a friction brake, in or on the said wheel, which makes a friction in one direction to resist the feed-motion, equal to the tension of the reaction spring when at rest; that the time of starting the wheel shall be positive, and a greater friction or resistance in the reverse direction to prevent the wheel from being turned back by the tension of the cord. The nature of the second part of the invention consists in providing a wire with guides and with a turning wing, and passing the thread on its way from the spool, bobbin, or reel, to the needle around the said wing, so that by turning the said wing on the wire the thread shall be moved around the body of the wire more or less, and thus increase or decrease the friction of the said thread in proportion to the number of turns which it makes around the body of the wire.

Claim.—The method of imparting the feed-motion to the feed-wheel *a*, by means of the cord connected at one end with the adjustable arm of the rock-shaft *j*, and the other with the re-action spring *o*, substantially as specified, when this is combined with the friction brake, operating substantially as specified, and for the purpose set forth.

Also, governing and regulating the tension of the needle-thread by means of the wire g^1, with its eyes or guides, substantially as specified, in combination with the turning-wing h^1, by which the coiling or winding of the thread around the wire can be increased or decreased at pleasure, substantially as specified.

Also, in the sewing of leather, causing the needle-thread, on its way to the needle, to pass through linseed oil, or its equivalent, mixed with a dryer, substantially as and for the purpose specified.

No. 10,976.—CHRISTIAN B. MILLER.—*Improvement in Process for Galvanizing Metals.*—Patented May 30, 1854.

The improvement consists chiefly in the use of a rotary cylinder for the purpose of containing the metals while in the different baths preparatory to and during the galvanization; also, in the arrangement of the tanks C B and the melting and drying apparatus A, and the furnishing thereof with the ways *k k* and rests *g g*, for the easier locomotion and revolving of cylinder D, in and from one to the other of said vessels.

The claim is restricted to the use of the cylinder D, in combination with the melting and drying apparatus, and diaphragm tanks A B C, for the purpose described, and operated as set forth, for the galvanizing of metals.

No. 10,977.—JOHN MURPHY.—*Improvement in Process for Treating Gutta Percha.*—Patented May 30, 1854.

The improvement refers to the process of re-heating, as patented to John Rider, in June, 1852, and consists in mixing two ounces of sulphur with ten pounds of gutta percha, and heating the latter to about 285° Fahrenheit, preparatory to the regular vulcanization; this amount of sulphur, although not enough to vulcanize the gum, being alleged to serve the purpose of expelling certain volatile ingredients preparatory thereto.

Claim.—Incorporating with gutta percha, substantially, the proportion of sulphur, or its equivalent, herein specified; and then subjecting it to such a degree of heat, and for such a length of time, as to expel therefrom its injurious volatilizable ingredients, preparatory to vulcanizing the gutta percha thus treated, or of using it in the condition that said process of treatment puts it into. No illustration.

No. 10,978.—CHARLES T. APPLETON.—*Improvement in Dyeing Process.* Patented May 30, 1854.

The improvement is illustrated in the drawing, in which A represents an air-tight vat, in which the pressure of the air may be increased or diminished above or below the pressure of the atmosphere by the pumps E H, or a vacuum generator D, while the goods to be dyed may be kept in constant motion by being wound around the rollers *l l*, acted upon at the discretion of the operator by means of the gearing *n p q;* the object of varying pressure being to expel the air from the pores of the fabric, and thus to prepare the same more perfectly for the reception of the dyeing material, as well as to force the latter more thoroughly through the minutest pores of the goods under treatment.

Claim.—Controlling the pressure of the atmosphere during the process of dyeing by means of exhaustion, pressure, &c., in combination with the method herein described, of keeping the folds of the goods separated from each other by keeping the fabric constantly in motion, or by suspending it upon hooks within the vat, as set forth.

No. 10,979.—WILLIAM BEAL.—*Machine for Cutting and Grinding Corn, Cobs, Bark, &c.*—Patented May 30, 1854.

In the figure, D is a cast-iron cylinder, with a series of ribs on its surface, which ribs are notched as shown in drawing; E is the concave, which has ribs similar to those in D. The surfaces on both concave and cylinder, which lie between the ribs, are also notched.

Claim.—The application and use of the peculiar form of tooth cut in the ribs of the cylinder and concave, the front of the tooth being shaped obliquely across the ribs, and every succeeding tooth being oblique in an opposite direction to the preceding one.

No. 10,980.—JOHN H. BARSANTEE.—*Improvement in Knitting Machines.*—Patented May 30, 1854.

In the accompanying drawing, two cylinders, L and M, are placed concentrically, with a space sufficient for the dust and waste wool to sift down between them for the purpose of preventing their clogging. At four points there are projections *c*, on the inner cylinder I, to keep the space equal all around, and to guide the cylinder. The outer cylinder M is connected with the moving power by means of four rods J, from which project arms. The rods J are connected with eccentrics on a shaft for the purpose of raising the cylinder accurately and steadily, while it has freedom to revolve.

Claim.—The arrangement and combination of the two cylinders L and M, with a space between them, and supported and moved substantially in the manner and for the purposes set forth; also the ring in which the inside cylinder L sits, and by which it is elevated or depressed, said ring being attached to the frame by set screws for that purpose; also vibrating the cylinder by means of the adjustable lever interposed between it and the gearing, or the equivalent thereof, substantially in the manner and for the purpose specified.

No. 10,981.—CHARLES H. BIGELOW.—*Improved Mode of Manufacturing Turbine Wheels.*—Patented May 30, 1854.

In the drawing, *l* represents the wrought-iron bucket, and *n* the dovetails on its upper and lower edge, about which the rim is cast.

Claim.—1st. Attaching the buckets of turbine wheels to their rims or disks, by forming tongues or dovetails on their upper and lower edges, and then flowing the melted metal used in casting the said rims about them, so that the rims, when cool, shall rigidly hold and embrace the buckets, substantially as set forth.

2d. Attaching the guide curves or diaphragms of the turbines to their disk, by casting them in a similar manner in connexion with their disk.

3d. Using the guide curves of the turbine to sustain the weight of the disk, and of the water impinging upon the same, by casting the lower part of the iron flume around dovetails formed on the said guide curves, so as to mortise them together, or by casting the lower part of the iron flume into holes formed in the said guide curves, so as to rivet them together, as above described.

No. 10,982.—JOHN BROWN.—*Improvement in Hot Water Apparatus.*—Patented May 30, 1854.

The improvement consists in making the water-tight joint as described, and securing a large radiating surface of pipe.

Claim.—The curved return-bends, formed with and on the upper part of the end of each pipe, to pass into and connect with the next pipe above, thereby allowing of the pipe *g* being of the full size of any flanch or socket that would be needed with a separate elbow, exposing

more surface for the size of the apparatus, and preventing air remaining in the apparatus, as described and shown. Also, the construction and arrangement of the apparatus for the purposes and substantially as specified.

No. 10,983.—ABEL BREAER.—*Improvement in Fastening the Disk and Rim of Car Wheels.*—Patented May 30, 1854.

The disk and rim are each furnished with projections—when united a conical cavity, into which is passed the securing-bolt, as shown in section at A. The invention disclaims bolts radial or parallel to axis.

Claim.—For confining cast-iron wheel rims to simple or double disk bodies or centres, the use of bolts whose direction is parallel with a plane perpendicular to the axis of the wheel, and whose direction is also in the course of circular arcs, described from the centre of the wheels; the bolt being either conical in form, or encased by conical sheaths, to facilitate such adjustments as shall secure the parts firmly together, substantially as described.

No. 10,984.—I. H. FAIRCHILD.—*Improvement in Hooks and Eyes.*—Patented May 30, 1854.

This improvement consists in bending the point of the hook within the bow of the body thereof, to prevent the eye from becoming loosened.

Claim.—The peculiar form and construction of the hook, having its point brought round within the bow, as described.

No. 10,985.—CHARLES GREGG.—*Improved Chuck.*—Patented May 30, 1854.

Claim.—The combination of the cylindrical die A, having scores, or recesses, in its periphery, with another and smaller cylindrical die D, having a groove cut in its periphery parallel with its axis, thus forming two sharp edges that sink into the body to be held, when pressed against it by means of the screw and slide.

No. 10,986.—JOHN HARRADAY.—*Improved Machine for Cutting out Cloth.*—Patented May 30, 1854; in England, January 20, 1854.

The main object of this machine is to cut out several pieces of cloth or other material, at the same time, to a uniform shape and size. The operation is performed by a straight-edged blade or knife, working with a reciprocating movement through the table B, in a direction perpendicular thereto; one side and the edge working in contact with a sharp edge which is fixed at one side of the opening in the table. The table is made with a loose centre-piece J K, which contains the open-

ing through which the knife reciprocates in performing the cutting operation. This centre piece is capable of turning on its axis in line with the axis of a shaft D, which carries the knife, the centre-piece being geared with the shaft in such a way that both may rotate together; and thus the edge of the knife may be presented in any direction desired, and, at the same time, maintain its proper position in relation to the cutting edge in the opening. In the figure, D represents the shaft which carries the cutting-knife, and is connected by a blade and socket-joint *d* to a connecting-rod F, which connects with a stud on the face of a disk G, which is secured to the front end of a horizontal shaft, which is the driving-shaft of the machine.

Claim.—The employment, for the purpose of cutting several thicknesses of cloth or other material, of a reciprocating knife, which works through an opening in a table, upon which the cloth is placed, and has one side and its edge working in, or very nearly in, close contact with a sharp edge plate *i*, substantially as herein set forth.

Also, the employment of a knife *o*, with the back extended in the form of a rod.

Also, making the table which carries the cloth or material with a loose centre-piece J K, which contains an opening to receive the knife, and has its axis in line with the axis of the knife-shaft, so as to turn therewith, and at all times bear the proper relation thereto.

No. 10,987.—Silas A. Holmes.—*Improvement in Cameras for taking Stereoscope or other Daguerreotypes.*—Patented May 30, 1854.

The improvement consists in attaching two camera-boxes together, so that they are both adjusted vertically on the object of which a picture is to be taken; and then the two cameras are directed on the object in such a manner that two pictures can be taken of the same object at one time for stereotypes and other purposes.

Claim.—Attaching two camera-boxes at or near their front vertical edges 3, and adjusting one or both cameras to the object of which a daguerreotype or other view is taken, by means of a pinion and rack.

No. 10,988.—Carmi Hobson.—*Improved Stave-Machine.*—Patented May 30, 1854.

The nature of this invention consists in the combination of the rim G and wheel D, both provided with suitable cutters *a* and *b*, and concentrically arranged about the same axis; and these, in combination with a fixed rest J, so that, by passing the stave through between the inner periphery of the rim and the outer periphery of the wheel, both running in the same direction, the stave shall be dressed on both sides by a simultaneous operation, and without the use of auxiliary guides, yielding rollers, or any other appliances beside the rim, wheel, and rest.

Figure 1 presents a front view of the machine.

Figure 2, a section of the same.

Claim.—The combination of the cutting-rim and wheel, hung in the same vertical plane, with the fixed rest passing between their cutting

surfaces, for the purpose of holding and controlling the stave whilst it is being dressed on both sides.

No. 10,989.—THOMAS T. JARRETT.—*Improvement in Hay-Elevators.*—Patented May 17, 1854.

This invention consists in the application of a cord and weight to hay-elevators, by means of which they may be discharged at any desired elevation.

To the body of the elevator is hinged a bail or handle C, to which a tongue D, permanently attached to the elevator at one end, is latched or looped. The cord I should be of sufficient length to permit the elevator to ascend to the desired height, and is fastened to the loop or catch E in such a manner that, as soon as the intended height is reached, a weight L, fastened to the end of the cord, causes the loop to rise from the end of the tongue over which it works, thus permitting the body of the elevator to swing upon its hinged bail in a vertical position to discharge its load.

The claim is embraced substantially in the above description.

No. 10,990.—GEORGE NEILSON.—*Ventilator Window for Railway Cars.* Patented May 30, 1854.

This invention consists in making a window-frame in shape of a frustrum of a quadrangular pyramid, the frame being composed of four trapezoidal frames A B C D, in each of which a pane of glass *a* is inserted; the inferior base of the window is made open, as seen at F, and has a closing window E, opening inwards. The window opening is surrounded on its four sides with a deflecting flanch *b*, curved horizontally.

Claim.—The frustro-pyramidical ventilator window, as made of top, bottom, and vertical sides or windows A B C D, and with an opening F and a closing window E, substantially as specified.

Also, the arrangement of the deflector range entirely around the window opening, and in respect to the deflecting sides A B C D, as specified, not intending to claim a deflector or guard, as applied to a car-window opening, but to limit my claim to its arrangement on four deflecting sides or panes, and entirely around the opening between them, as set forth.

No. 10,991.—J. R. PIERCE.—*Improvement in Neck-Yokes.*—Patented May 20, 1854.

This invention consists in placing the attaching rings of neck-yokes upon bars, with racks passing on each side of a pinion movable upon the main bolt, for admitting of the equal longitudinal movement of the said rings.

No. 10,992.—DANIEL POOLE.—*Improvement in Quartz Crushers.*—Patented May 30, 1854.

This is an improved arrangement of grooved and smooth cylindrical cast-iron rollers, co-operating in pairs to crush and pulverize mineral ores and other substances. An endless apron, moved by the same power as the cylinders, feeds the machine.

Claim.—The arrangement and construction of the machine, substantially as herein described.

No. 10,993.—ELIAS M. RAY.—*Improvement in Knitting Machines.*—Patented May 30, 1854.

This invention is an improvement of the French circular rotary knitting machine, in which there is not only a row of upright needles arranged in a circle, and each made to stand vertically, but a toothed sinker-wheel to run between the needles and form the loops. The said row of needles is attached to a rotary frame that is made to rotate horizontally over or above a stand or base, and is rotated by bevel gears, one of which is arranged on the bottom of the rotary frame or its shaft, while the other is fixed on a driving-shaft.

This invention consists in having a series of wires or lifters arranged horizontally and radially, and made to extend between the needles, there being one of such lifters between every two needles, and made to project beyond their outer surfaces a short distance. At its inner end each lifter-bar is so applied to the rotary frame as not only to hold the lifter-bar in place, but to allow the front end of the lifter-bar to be raised upwards.

Claim.—The combination of the series of radial and horizontal lifter-wires, and the stationary lifter-cam *k*, with the rotating set of needles; the same being made to operate substantially as set forth.

No. 10,994.—MARTIN W. STEVENS and EDWARD G. KINSLEY.—*Improvement in Sewing Machines.*—Patented May 30, 1854.

Claim.—When the shuttle and feed-motion are arranged within a cylinder, upon or around which the work is placed, so arranging and operating the feed-motion as to move the work longitudinally to the cylinder substantially as described, in order that longitudinal seams may be made in articles of circular form.

Also, attaching the pressure-rollers L L to a collar M, which fits to a portion of the needle-rod guide D, or other suitable fixed part of the machine, in such way, substantially as described, that they may be turned and readily secured to run either longitudinally or transversely to the cylinder or bed upon which the work is placed.

No. 10,995.—ROBERT S. THOMAS.—*Improved Typograph.*—Patented May 30, 1854.

The operation of this machine is as follows: The springs M N being supplied with ink, and a sheet of paper placed around the cylinder D,

and there secured by springs, the operator takes hold of the handle G, and raising it, turns it until the desired letter is underneath, and then brings it in contact with the inking apparatus. He then brings that letter over the space between the ends of the springs M N, and, allowing the guide-pin F to enter the hole which corresponds with that letter, presses the bar down with a force sufficient to produce the impression on the paper upon the cylinder and overcome the resistance of the springs, the reaction of which lift the type from the paper when the pressure is removed. The same operation is repeated with the succeeding letters, the cylinder D being turned each time sufficiently to leave a proper distance between the letters. When a line is completed, the sliding-frame *c* is moved more or less, according to the distance required between the lines.

No. 10,996.—Benjamin C. Van Duzen, assignor to J. Martin and B. C. Van Duzen.—*Improvement in Furnace Grate Bars.*—Patented May 30, 1854.

In this invention the bearing-bar is perforated at regular distances, making a socket to receive a pivot cast on the end of the grate-bar, which has no protuberance as usual in the side.

Claim.—The form and arrangement, substantially as described, of furnace grate-bars and bearing-bar, the former being clear of the usual protuberances for lateral support, and having each one a pivot at its rear end occupying a socket in the bearing-bar, so as while holding the rear ends of the grate-bars in their proper places and relative distance, to capacitate them for lateral shifting at their front ends, at the option of the furnace man, without liability to dislodgment, or for removal of a portion without endangering the stability of those which remain, and for other objects as set forth.

No. 10,997.—William Waley, assignor to Jonathan Whipple, Jr.—*Improvement in Self-acting Nipper-Blocks.*—Patented May 30, 1854.

The dotted lines show the position when the rope is checked. The lever H is meant to release the rope partially when desired.

Claim.—The construction and arrangement of the block, as herein shown and described, viz: placing the two pulleys A B and nipper J between the cheek-plates C, and attaching said cheek-plates by a joint B to a standard E, the nipper part F, of which is curved or bent, and is placed a short distance below the pulley B and nipper J, so as to allow sufficient space for the rope G to pass between the pulley B, nipper J, and the end F, when the two pulleys are in a horizontal line; by which arrangement and construction the block is made self-acting.

No. 10,998.—Brown S. Wood.—*Improvement in Knitting Machines.*—Patented June 6, 1854.

The object of this invention is the knitting of ribbed goods by power. The first improvement consists in an arrangement of wide and nar

row jacks, for the purpose of forming a row of long and short loops, which they lay in proper positions to be caught by the needles,—the long loops by the rib-needles, and the short loop by the other set of needles, and drawn through similar loops previously formed in the same manner.

The second improvement consists in operating the jacks by means of a double slur, to which the heads of the jacks are so fitted that the narrow jacks are operated upon in advance of their regular turn, in order to prevent the wide jacks, in advance of them, from taking up the thread necessary to form the narrow loops, and thus preventing the proper formation of the loops and breakage of the thread.

The third improvement relates to the relative arrangement and movements of the two sets of needles, for the purpose of forming and seizing the loops, and drawing each row through the preceding one.

The fourth improvement relates to the arrangement of the rib-needle in combination with a creased presser, by the pressure of which they require to be sprung into the proper position to enter the loops, formed by the jacks, to receive them; the said arrangement of the needles being such, that after they have entered the loops, and the presser is removed, they will spring back and draw the loop tight around them, so that on their descent or retiring motion from the loops, the latter will not fail to pass under their points and into their hooks.

The fifth improvement consists in supporting the head which carries the jacks, the slur, and the thread carrier, in a frame which is capable of being swung out of its operative position, to allow the quarter to be run on the machine, and the needles to be adjusted conveniently; the said capability of swinging also serving for the adjustment of the jacks for regulating the depth of the loops.

Figures 3, 4, and 5 are on a smaller scale than the rest of the figures.

Claim.—The employment of a series of wide and narrow-tongued jacks P P, and P^1 P^1, arranged in any desired order of succession, to form short loops upon the frame needles *c c*, and lay long loops between certain of the said needles, in such a manner that they may be entered and caught by a set of rib-needles c^1 c^1, working parallel or nearly so with the frame needles, substantially as herein described.

Also, the method of giving a lead or advance motion to the narrow jacks P^1 P^1, by means of the double slur *o* o^1, having one part wider than the other, and the recess *n*, made in the heads of the wide jacks, to prevent their being operated upon until the wide part of the slur comes in contact with them, and allow only the narrow jacks to be operated upon by the narrow part, substantially as described.

Also, the movements of the two sets of needles relatively to each other, as described, that is to say: the front needles *c c* rising first, and then remaining stationary to receive the loops upon and between them; the rib-needles being in the mean time stationary, but rising after the loops are formed, and entering the loops intended for them; and then both sets of needles descending together, to carry the loops through those previously formed.

Also, arranging the rib-needles c^1 c^1 at such distance from the front needles *c c* that their upward motion will not carry them through the

oops; and springing their ends forward to the requisite position for that purpose by means of a presser W, constructed as described.

Also, attaching the head Q, which carries the jacks, the slur, and the thread carrier, to a frame M, which is capable of swinging back, as described, to expose the needles and afford facility for their adjustment, for the running on of the quarter, and for the repair of any damage to the machine or to the web.

No. 10,999.—ROBERT WADDELL.—*Improvement in Steam-Engines, relating to the Valve.*—Patented June 6, 1854; in England, April 27, 1853.

This improvement consists, 1st, In the equilibrium table *f*, with its ledges *g*, applied to and acting in combination with the valve *e*. 2d, In the packing pieces *b b*, extending from the back of the valve chests and abutting against the back of the valve, in combination with the several passages *o o*, leading from the ports.

3d, In combining the equilibrium table *f* with the packing *p p* and small passages *o o*, by the joint action of which a slide-valve is balanced.

No. 11,000.—A. H. RAUCH.—*Improvement in Machines for Washing Bottles.*—Patented June 6, 1854.

This invention relates to improvements whereby bottles of all sizes and descriptions can be washed on their outer and inner surfaces at the same time, with great facility and despatch. The machine as represented in the drawing has two run of bottles; it may, however, have a larger number; water being shown coming from the reservoir and passing up through the pipe D D^1 and branch J into the bottle, and against its outside, and then descending and passing out through the mouth of the bottle. and down its outside, from which it continues its course and falls into the receptacles C M N, and passes off through the pipes O P Q. It should be mentioned that while the water is being injected into, and up against the outside of the bottle, the bottle has a rapid revolving motion communicated through the cone P, which fits round its bottom; and as the motion is communicated to the cone by means of the pulley and band at the top of the machine, it is caused to revolve, and consequently the bottle with it. The machine may be driven by hand or steam, through a crank-shaft bevel gearing, giving the required speed. The hinged brush will be understood by the figure 3; D being the water-tube, and *g* a spring to expand the brush-frame.

No. 11,001.—CHARLES F. BROWN.—*Improvement in Instruments for taking Deep-sea Soundings.*—Patented June 6, 1854.

This invention relates to a new and useful implement for sounding or ascertaining the depth of the ocean, and consists in attaching to a spindle or shaft A a chamber B of a prolate spheroidal form. said

chamber containing a requisite quantity of gunpowder within the lower part of the spindle or shaft; and underneath the spheroidal chamber there is placed a needle, which is operated by a spring, and forced against a cap placed on a nipple at the lower end of the chamber; said needle being forced against the cap, and firing the powder, when the lower end of the spindle strikes the bottom of the ocean, by means of suitable mechanism. The implement is allowed to descend, or is let fall from the surface of the water; and the time which escapes from the moment the implement is let fall till the report is heard or the concussion felt, is denoted by a stop-watch. Reference is then made to a table formed by previous experiments, and the correct depth ascertained; the depth being in proportion to the time which elapses from the letting fall of the implement till the report is heard or the concussion felt—the increase of buoyancy from increased depth being taken into account.

Claim.—An implement constructed and operated substantially as herein described, for the purpose of sounding the depth of the ocean.

No. 11,002.—Joseph Baron de Palm.—*Improvement in Brick and Pottery Kilns.*—Patented June 6, 1854; patented in England July 13, 1852; patented in France, August 13, 1852; patented in Holland and Belgium, September 15, 1852.

This kiln, as clearly shown, consists only of one single kiln, divided into different compartments, to regulate more conveniently the heat, which otherwise must indiscriminately circulate in one and the self-same kiln.

An improved system of registers has been adopted between the different compartments, to regulate and distribute the heat; and by these means has been obviated a most important disadvantage, arising where several kilns are employed to effect large products, viz: the great loss or waste of fuel originating when the cold air circulates all around each separate kiln, and when the heat, also, at a great loss, must be carried from one kiln into another, by means of flues or dampers, likewise surrounded by cold air.

A minute description is omitted, as more space for such purpose would be required than can be spared in this report.

Claim.—A series of upper and lower chambers, in kilns for baking and burning brick and pottery, communicating with each other by apertures in the partition walls and floors, in combination with adjustable dampers or registers in the apertures in the floors between the upper and lower chambers, as herein described, for the purpose of regulating and controlling the heat in its ascent, and directing it to those parts of the upper chambers where it may be most required, substantially as herein specified.

Figure 2 is a section through the line B *b* of figure 1.

Figure 3 a section through A *a* of figure 1.

No. 11,003.—HENRY R. CAMPBELL.—*Improvement in the Combination of Railroad Tracks and Wheels.*—Patented June 6, 1854.

This improvement consists of wheels with a flange in the middle of the tread made to run upon double rails, which bear on their tops the whole weight.

The patentee disclaims double or compound rails, as also similar wheels and rails where the weight is borne on the inside of the groove and the flange, for the purpose of increasing adhesion, or where such a groove acts as a guide to arm or driving-wheel.

Claim.—The combination of the wheel with the flange in the middle of the tread, (which shall be cylindrical, on both sides of the flange, as to diameter and tread,) with the double line of rails, so constructed that the flange of the wheel shall run freely between said double line of rails, and with sufficient play or space between said double line of rails to avoid unnecessary friction against said flange, and to accommodate the ordinary inequalities in the width and parallelism of the railroad track; the surfaces of said double line of rails to be level, or nearly so, and the two portions of the tread of the wheel to bear the whole weight of the wheel equally, or nearly so, on the surfaces of said double rails.

The tracks and wheels to be arranged for use in combination, and for application to railroad purposes, as shown in the drawings, and herein described.

The purposes and objects claimed for said improvement, as the result of the combination, when applied to railroad purposes, is increased economy in the track, engines, and cars, in power, speed, and safety, profit, and usefulness of railroad communication.

No. 11,004.—SAMUEL MCCORMICK.—*Improvement in Threading Screws.* Patented June 6, 1854.

This improvement consists in forming or impressing screw-threads on the plain surface of blanks, by means of three revolving dies 7, 8, 9, placed triangularly on a suitable frame, and worked by mechanism, as set forth and shown.

Claim.—The forming or impressing of screw-threads or ornaments on the plain surface of screw-blanks, or other plain shafts of metal, by means of three revolving dies placed triangularly on a suitable frame, and worked by mechanism, as described, (or by the mechanical equivalent thereof,) so as to produce the results described.

No. 11,005.—DONALD TAYLOR.—*Berth-Knee Former*—Patented June 6, 1854.

This improvement consists in the combination and arrangement of the side-rulers or bars A B, the slotted bars C D, the bar I, with the springs F F, the friction rollers G H, and set screw K K K, or their equivalents, for adapting the instrument between any two timbers, and for the width of the berth-knees of vessels.

No. 11,006.—HENRY ALLEN.—*Improved Machine for Dressing Polygonal Timber.*—Patented June 6, 1854.

The drawing presents an end elevation of the machine.

The patentee does not claim the employment of a pattern rail to guide a rotary cutting-tool or wheel over a piece of work, as such has been used in machines for turning oars or other irregular forms; nor does he claim the invention of the tracer permanently fixed to the frame G.

Claim.—The improvement whereby the said cutting-tool P^3 P^3 may be adapted to the reduction of a stick of any ordinary diameter, and to a size suitable to a stick, as described; such improvement consisting in combining with the tool-frame G the sliding-rest P, operated by the lever Q, and held in position by it and the perforated size-plate T.

No. 11,007.—WILLIAM BALLARD.—*Improvement in Ship-timbers.*—Patented June 6, 1854.

This improvement consists in cutting out the heart of artificially bent timbers at the curve, and inserting therein a metal plate B.

Claim.—Cutting the heart out of artificially bent ship-timbers at the curve or bend known as the "naval timber," and combining therewith an iron plate (curved so as to fit the curve of the timber) by inserting it in the place cut out of the timber, so as to be protected from rusting by the action of the atmosphere or bilge-water of the ship, substantially as hereinbefore described.

No. 11,008.—WHITMAN PRICE.—*Improvement in Cultivator.*—Patented June 6, 1854.

In this cultivator a series of twisted blades *d d d* are rotated upon shaft *e*, by means of driving-wheel *a*. There are also two shares J J, to cultivate the sides of the row of corn; the frame *f f* is allowed some play by means of straps *p p*, so that the driving-wheel may pass over stones with less disturbance of the working. Weight *i* may be employed when the draught is too slight to make the machine work deep enough.

Claims.—1st. The construction of the accommodating frame *f f*, having uprights *g g* and cross-ties or suspension bars *h*, together with the compensating strap or equivalent *p p*.

2d. The construction of the twisted obliquely-curved blades or thinners *d d d* attached to the radial arms *v v*, forming a rotary cotton thinner; and the using the same with the right and left double-shank furrow-shares J J, specifically as set forth, and as arranged with the cultivator, as described.

No. 11,009.—JARED PRATT.—*Making Seamless Metal Tubes.*—Patented June 6, 1854.

This improvement consists in moving the mandrel M and tube L in a horizontal direction, and rotating around them the compressing rolling dies J, or vice versa.

No. 11,010.—WILLIAM W. HILL.—*Improvement in the arrangement of Dampers in Rotary Stoves.*—Patented June 6, 1854.

The nature of the improvement secured by this patent is set forth with sufficient distinctness in the claim.

Claim.—The combination and arrangement of the dampers with a revolving or rolling oven, as set forth in the foregoing specification and accompanying drawings.

No. 11,011.—WALTER WESTRUP.—*Improvement in Grain Mills.*—Patented June 6, 1854; patented in England January 24, 1850.

In portable mills used in military or other expeditions, it is important to economize space or bulk. This compact mill includes the conical runners with corresponding stationary stones, and a bolting apparatus, united in one machine, and driven by power applied to a common shaft.

Claim.—The general arrangement and combination of parts herein described, that is to say: The use of two or more pairs of mill-stones, the runner of each pair being mounted on the same vertical shaft, and arranged in such manner that when the meal escapes from the first pair of stones, it may be subjected to a dressing operation for the purpose of separating the already formed flour from the unground meal, as set forth, leaving the unground meal when freed from the flour to pass through the second pair of stones to perfect the grinding operation, substantially in the manner herein described.

No. 11,012.—MATTHIAS P. COONS.—*Improved Rivet-clamp for Wire Fences.*—Patented June 6, 1854.

Figure 1 is a perspective view of this clamp.

Figures 2 and 3 are section views, showing the manner in which the two parts are fitted to receive the wire that is to pass between them: d^1 d^1 show the corrugated wires; o^1 o^1 and r^1 r^1 are elevations upon each half of the clamp, which, fitting together and being secured by the rivets s^1 s^1, prevent the clamps from being moved about in any direction.

Claim.—The peculiarly constructed rivet-clamp and its application to wire fences, or for equivalent purposes, in the manner and substantially for the purposes hereinbefore described and stated.

No. 11,013.—WILLIAM A. FLANDERS.—*Improvement in Moth-killers.*—Patented June 6, 1854.

This invention consists in arranging a blow-pipe lamp A, with an alcohol reservoir E, from which the vapor may pass by tube F, so as to come in contact with the flame of the lamp, forming a horizontal jet of flame H, above a pan of water G. The flame is protected from extinction by the sides of the lamp; and yet issuing through a hole in the lower part of smoke-pipe D, it presents itself for the approach of the moth-killer, which, being crippled by the flame, falls into the water below and is drowned.

The applicant does not claim the blow-pipe lamp.

Claim.—The within described moth-killer, constructed and operating in the manner substantially as set forth; the lamp being entirely protected from the wind, and from being extinguished by the dead millers, and the flame being blown through an opening in the side of the lantern as explained.

No. 11,014.—Ross Deegan.—*Improved Machine for Cleaning and Watering Streets.*—Patented June 6, 1854.

The nature of this invention consists in depositing the dust thrown up, by the movement of a rotary sweeper P^1, in a chamber D in the rear part of the machine, by means of a draught created by a revolving fan or blower C, the sweeper and fan being operated through suitable gearing by the forward movement of the rear wheels of the machine; and also in using, in connexion with the fan and sweeper, an apparatus for distributing water. The water is contained in a chamber having an outlet pipe G, and the quantity deposited is governed by a valve E, substantially as described.

No. 11,015.—Edwin Clark and James M. Clark.—*Improvement in Flouring Mills.*—Patented June 6, 1854.

By this compact arrangement of devices in flouring mills, the materials passing through the bolt are expeditiously separated from each other and deposited in suitable receptacles as claimed or conveyed off to be re-bolted, thus economizing room and operating with less expenditure of power.

Claim.—The double-conveyer for the fine flour and middlings, constructed substantially as described, to wit: The conveyer for the middlings being attached to a tube enclosing the conveyer for the fine flour; the conveyer for the fine flour terminating in the receptacle r^1, and that for the middlings terminating in receptacle r^2; and, in combination with this double-conveyer, is claimed the arrangement of the receptacles r^1, r^2, elevators g g^1, spouts h and j, for returning the fine flour and middlings respectively to the bolt and the eye of the mill as set forth.

Also, the arrangement in series of spouts 1, 2, 3, 4, 5, with their slide valves, in combination with the separate receptacles and conveyers n and p.

No. 11,016.—Smith Beers.—*Improved Method of Turning Hubs.*—Patented June 6, 1854.

In using this machine, the material is submitted to the action of several sets of revolving cutters in succession, while the material revolves slowly; such sets of cutters being intended to produce distinct parts of the form required, and all being hung in a revolving frame, or its equivalent, which admits of their being brought successively into the positions required in the performance of their respective offices.

Figure 1 is a perspective view.

Figure 2 is a transverse sectional elevation of its working parts.

Claim.—The arrangement and the manner of operating a series of revolving cutters, for the purposes and in any manner substantially the same as set forth.

No. 11,017.—TIMOTHY F. TAFT.—*Improved Device for operating Cutter-Heads of Planing Machines.*—Patented June 6, 1854.

This improvement consists in placing the cutter-head P upon the end of a horizontal arm L, that is caused to vibrate across the surface of the board; thus giving to the cutters a position nearer to their centre of motion, and to the machine a more rapid feed.

The improvement is more particularly designed for use in connexion with the "Daniels Planing Machine," and a perspective view of this is, therefore, given with the improvement attached. See fig. 1.

Figure 2 is a plan of the vibrating arm and cutter-head.

Claim.—Hanging the planing cutters to the vibrating arm L, or its equivalent, in the manner and for the purpose set forth.

No. 11,018.—ALFRED BRADY.—*Improved Vault Covers.*—Patented June 6, 1854.

This invention consists in the peculiar form given to the upper face of the cylindrical lens, in combination with the India rubber or other elastic water-proof packing and vault cover, by means of which the lenses are less exposed to be scratched and rendered opaque by persons or vehicles passing over their exposed upper surfaces.

No. 11,019.—NOAH W. SPEERS.—*Improved Hydrant Cap.*—Patented June 6, 1854.

This invention is designed to overcome the liability to loss that exists in using the caps of stop-cock boxes as at present constructed.

Claim.—The formation of a stop-cock box with catch *h*, of width exceeding the play of the cap within the rebate, and with pivots *b*, whose distance from their confining flanges *g* exceeds the depth of the rebate, or devices substantially equivalent, for the objects described.

Figures 1, 2, and 3, different positions of the cap.

Figure 4 is a vertical section through the line *x y*, fig. 1.

No. 11,020.—JAMES A. WHIPPLE.—*Improved Mechanism for Operating Pumps.*—Patented June 6, 1854.

This improvement is more particularly applicable to pumps with a double piston reciprocating in a single cylinder, though it may be applied to any kind of pump in which it is desired to obtain a more rapid movement of the piston than is attainable by the ordinary construction.

Claim.—The combination of the wheel B, the cogged segments C and D, and the racks upon the ends of the pistons; by which is attained

an accelerated motion of the pistons, at the same time that the power which actuates them is applied in a vertical line passing through their centre, great fiction and wear of the pistons and pump-barrel being thereby avoided.

The drawing presents a sectional plan of one of the pumps mentioned, with the improvement.

No. 11,021.—SAMUEL H. DUDLEY.—*Road Scraper.*—Patented June 6, 1854.

This invention consists in the peculiar arrangement of the bows B B, and the combination of them with scraper A and chains C, as described; so that the operator can continue the work of taking the earth from the sides of the road, and delivering it in the middle, without the trouble and delay of upsetting, or of lifting the scraper in order to discharge the load.

Claim.—To the combination of the bow or bows B with the scraper A, for the purpose set forth, and in a manner substantially as herein described.

No. 11,022.—EDWARD P. DAY.—*Improvement in Machines to Print Subscribers' Names, &c., on Newspapers.*—Patented June 6, 1854.

The type cylinder B, having a series of grooves D D cut in its periphery and parallel to its axis, and binding screws E in the cap or end plate of the cylinder, for adjusting the type in the cylinder grooves, in combination with the table T, platen L, and ratchet wheel F, for holding the paper, and rotating the cylinder, as an improvement on Henry Moeser's invention for like purposes, whereby all the names of a subscription list for one post office, and the address of the post office, may be printed at one operation.

No. 11,023.—F. M. ENGLISH.—*Improved Mode of Disconnecting Horses from Vehicles*—Patented June 6, 1854.

This invention consists in the arrangement and combination of the spring *a* with the dart *b* of the whiffle-tree, by means of which the trace can be held on, or disengaged, at the pleasure of the driver.

Claim.—To the arrangement of springs on the ends of swingle-trees, for holding the traces on the darts, and throwing off the same at the will of the driver, as herein fully set forth.

No. 11,024.—ROBERT M. WADE.—*Improved Lubricator.*—Patented June 6, 1854.

This improvement places the regulation of the supply and discharge of the lubricator more immediately under the control and within the reach of the engineer. Two openings are constructed in the feed cylinder A, marked *a* and *b*, one for feeding and the other for discharging; their relative positions being such, that when one is performing its

functions. communication between it and the other is cut off; either opening being brought into operation by a movement of the cylinder arm F, operated upon by a rod R, connected with it, and leading to a position near the engineer's stand.

Claim.—The hollow cylinder A, in combination with the jacket B, constructed and operated as set forth, viz: the two apertures in the cylinder being so situated, that while the upper one is admitting oil into the cylinder, the lower one is closed to the steam, and when the lower aperture is open to the steam, the upper one is closed to the steam and to the oil in the cup.

The drawings embrace a front elevation of the oil cup, and a section perpendicular to the axis of the plug.

No. 11,025.—A. B. LATTA.—*Steam Generator.*—Patented June 6, 1854.

This boiler is composed of tubes divided from 1 to 2, from 2 to 4, from 4 to 8, and so on, as shown by letters A, B, B.

Claim.—The dividing of the coil or coils, commencing with one, then dividing into two and three, sub-dividing into four, or any other number, as shown and described, or any equivalent device.

No. 11,026.—CHARLES F. MARTINE.—*Improvement in Sofa Bedsteads.*—Patented June 6, 1854.

Claim.—The windlass barrel D, and its working gears, or their mechanical equivalents, and the cords *b* of said windless barrel, in combination with the seat A, the back B, and a single spring mattress, as applied thereto, and made to operate substantially in the manner as hereinbefore described.

NOTE.—The main object of the combination is to turn the back B from an upright down into a horizontal position, or vice versa, for the purpose of a sofa or bedstead, as occasion may require.

No. 11,027.—HYMEN L. LIPMAN.—*Improvement in Eyelet Machines.*—Patented June 6, 1854.

This improvement consists in the use of an eccentric lever A, so arranged that by moving it to the right and the left, it is made to depress two pistons, to the end of one of which is attached a tubular cutter B, or punch, and to the other a point or fastener C, for securing the eyelet; thus greatly facilitating the operation and securing a more compact, convenient and speedy mode of fastening with eyelets, than has hitherto been attained.

Claim.—The arrangement in one stock of the double-acting lever A, punch B, and fastener C, with their spiral springs D D, and counter-dies or anvil block, for the purpose of punching holes for, and setting eyelets in one machine, as set forth; and this, when said lever actuates both punch and fastener, by allowing one to rise whilst the other is being forced down.

No. 11,028.—E. PHELPS.—*Improvement in Excavators.*—Patented June 6, 1854.

This invention consists in combining with a scoop, supported upon two wheels, two caster-wheels, one in front and the other in the rear of the scoop; the front caster-wheel being attached to the draught-bars, and so adjusted as that the amount of cut into the earth may be regulated to the nature of the soil to be excavated.

No. 11,029.—WILLIAM B. JOHNSON.—*Improvement in Seed-Planter.*—Patented June 6, 1854.

In this seed-planter, pin *a* of the driving-wheel holds pitman *f*, which carries arm *d* of rock-shaft *c*, giving motion to link-rod *e*, and causing bucket C alternately to ascend and descend. The seed is carried from hopper A by said bucket, whose front has a hole *s*, through which the seed falls, when the bucket rises out of hopper upon the convex surface semi-cone D, and then rolls over the grooved reciprocating table G to the ground. The buckets are sharp at bottom to enter the seed, and have adjustable false backs to regulate their capacity.

Figure 2 represents a section on line *o o*.

The patentee does not claim said grooved semi-cones, or their equivalents, separately and apart from the other devices herein specified, and used in combination therewith; as their equivalents have been used before by F. Van Doren; and are described in the specification of his seed-planter, patented April 13, 1852.

Claim.—1st. The method herein described of sowing seed broadcast by means of the ascending and descending buckets, grooved semi-cones or their equivalents, and reciprocating bed or table; constructed, arranged, and operating together in the manner specified.

2d. Constructing the seed-buckets with an open back, false or close adjustable inner back, for regulating the lifting capacity of the buckets, as herein set forth.

No. 11,030.—PATRICK CLARK.—*Water-Level Indicators for Steam-Boilers.*—Patented June 6, 1854.

The improvement and claim consist in the arrangement of the tubes C and F, in relation to the chamber B, in connexion with the boiler A, whereby, through the action of the steam and water in the chamber upon the steam in the tube C or F, the water in the tube is made an indicator of the height of the water in the boiler, or made to operate a valve in the feed-water pipe.

No. 11,031.—THOMAS & SAMUEL CHAMPION.—*Improvement in Feathering Paddle-Wheels.*—Patented June 6, 1854.

This improvement consists in bowing or arching (D) one or more of the shanks *a* of the paddles *b*, so that they may pass through the hub *c*,

and stand in the same transverse line with each other around the wheel; and in giving to the shifting guides E a side-motion just sufficient to disengage them from the projections of the paddles from one side of the hub, and simultaneously engage them with projections on the other side of the hub.

Claim.—1st. The bowing or arching of one or more of the shanks of the paddles, so that they may pass through the hub and stand in the same transverse line with each other round the wheel, with the paddles on each end of each shank, permanently, at right-angles to each other; whereby the great advantages above mentioned are attained, and the wheel greatly simplified.

2d. Giving to the shifting guides a side-motion, just sufficient to disengage them from the projections of the paddles from one side of the hub, and simultaneously engage them with projections on the other side of the hub, and vice versa, so as to effect the proper adjustment or shifting of the paddles, thereby dispensing with the inconvenience of having to turn the frame around to the opposite side of the wheel to shift the guides.

No. 11,032.—WAITMAN DAVIS.—*Improvement in Seed-Planter.*—Patented June 6, 1854.

This planter is carried in front of the breast by a strap passing over the workman's shoulder. In the bottom of a box are transverse bars B, with interspaces *a a*. The seeding-bar C is vibrated by means of bell-crank D and lever E; the latter being fastened at its lower end to the knee of the seedsman.

Claim.—The operating of the seeding-bar of seeding-machines by means of a bell-crank and lever, when said lever receives its motion from the leg of the operator in the act of walking, substantially in the manner and for the purposes set forth.

No. 11,033.—JOHN SHEFFIELD.—*Apparatus for Filing Mill-Saws.*—Patented June 8, 1854.

This improvement consists in the arrangement of the stirrups F F, cords E E, weight D, and roller B, for holding, guiding, and supporting the file.

Claim.—The arrangement of the stirrups, cords, weights, and rollers, for holding, guiding, and supporting a file, whilst filing a saw in the gate or frame, substantially in the manner herein represented.

No. 11,034.—ROBERT H. COLLYER.—*Gold Amalgamator.*—Patented June 6, 1854.

This improvement consists in providing cylinders 3 3 with buckets *a a*, for the purpose of raising the mercury, and bringing it into closer contact with the particles of gold.

Claim.—Effecting the amalgamation of the gold by the mercury metal, and the separation of the ores or other foreign matter, by means of a cylin-

der or cylinders B B, fluted to form buckets *a a*, or otherwise provided with such buckets, and revolving within a concave trough which contains the necessary quantity of mercury, said cylinder operating in the manner herein substantially described.

No. 11,035.—Isaac R. Shank.—*Improved Lath Machine.*—Patented June 6, 1854.

This improvement has reference more especially to the mechanism for regulating the thickness of the lath, separating it from the board or slab, and insuring its discharge.

Figure 1 is a vertical section of the machine at right-angles to the plane of the knife, and showing the knife *c* as it is about to enter the board. Figures 2 and 3 show the discharging action of the gauge *h*.

Claim.—The revolving gauge, formed of two unequal cylindrical segments, in connexion, as described, with a reciprocating knife, for the purpose of gauging and insuring the liberation and discharge of the lath.

No. 11,036.—David Russell.—*Improved Method of Operating Sawmill Blocks.*—Patented June 6, 1854.

Claim.—The combination of the transverse racks *i k*, the wheels *f, g, l, m*, and the shafts *s n*, with the horizontal connecting piece C, and its racks *h* and *p*, substantially as described, and for the purpose specified.

The drawing presents a plan of the improvement, with part ot the blocks broken out to show the gearing.

No. 11,037.—H. O. Clark.—*Lathe for Figured Work.*—Patented June 6, 1854.

The claim appears to embrace the novelty of this alleged improvement.

Claim.—The combination and arrangement of the sliding rest B, the V-shaped knife X, the side-cutters E E, and the bushings D, for the purposes set forth. An arm upon the carriage follows the pattern W, and the piece passing along and through the collar D, thereby receives the corresponding head. The carriage may carry a piece on its backward movement to be similarly turned.

No. 11,038.—Thomas Crossley.—*Improvement in Weaving Cut-pile Fabrics.*—Patented June 6, 1854.

The fabric which this most nearly resembles, is what is known as the Turkey carpet. The object of the invention is to produce a carpet with a pile that cannot be torn or swept out, and which may also be woven on a plain loom without Jacquard or dyeing apparatus.

In the accompanying drawing, *n n* is a heavy linen or cotton warp, which is kept at all times slightly strained, and which forms one side of the shed, the other side being formed by a woollen warp, which is allowed to remain loose. These two constitute the only warp of the carpet, and they are constantly upon opposite sides of the shed; *o* is a fine linen or cotton filling, which is shot below the warp *n*; *p* is a similar filling upon the upper surface of the linen warp.

Claim.—The above described method of weaving a cut-pile fabric; that is, interweaving the pile into the body of the cloth, by looping it over a shot of filling on the top of the foundation-warp, and under a shot of filling under the foundation-warp.

No. 11,039.—WILLIAM CANN.—*Improvement in Cleaning Bolts of Flour Mills.*—Patented June 6, 1854.

The difficulty of preventing the meal or flour from choking the fine meshes of the bolting-cloth suggested this invention, and by means of the slight percussion of the vibrating-cloth C, (seen in the figure in section,) the accumulating matter on the inside is detached.

Claim.—The application to flouring-bolts of a brush or cleaner, as herein described, which will prevent the bolts of flouring-mills from becoming clogged up with and obstructed by "beards" and other substances, which are contained in almost all wheat, and which will keep the bolts clean and free without the necessity of "shaving" and "brushing" the bolts; using for that purpose the aforesaid cotton, woollen, or other cloth, or other flexible material substantially the same, and which will produce the desired effect.

No. 11,040.—EDWARD HARRISON.—*Improvement in Grinding-Mills.*—Patented June 6, 1854.

The peculiarity of construction in this mill consists in rigidly securing the shaft for driving the lower stone in a metallic hub, which is continuous with, and forms part of, the metallic back of the stone.

Claim.—An improvement in the grinding-mill, produced by forming the runner of a metallic back and hub, combined with a disk-grinding face composed of the requisite quantity and quality of stone, and rigidly securing the shaft within the metallic hub of the runner, when the said runner is arranged and operates with the stationary uppermost stone, substantially as herein set forth.

No. 11,041.—JORDAN L. MOTT.—*Improvement in Securing Car-wheels upon Axles.*—Patented June 6, 1854.

The wheel is fastened on the inside, the key or other fastening being introduced through the hole in the wheel at *g*.

Claim.—The method, substantially as herein described, of securing rail-road car wheels to their axles by means of a nut, or the equivalent therefor, within the wheel.

No. 11,042.—Edwin J. Green.—*Improvement in Joint-bodied Buggies.* Patented June 6, 1854.

The nature of this invention consists in the combination of the spring-reach N R O, of the peculiar form and construction as described, with a joint-bodied buggy of the form and style of that patented by James C. Spencer, by means of which greater strength is given to the buggy, and an easy and elastic seat given to the driver, with less expense and greater simplicity than has been hitherto used for like purposes.

Claim.—The combination of a spring-reach of the peculiar form and construction as described, with a joint-bodied buggy of the form and style of that patented by James C. Spencer, by means of which greater strength is given to the buggy, and an easy and elastic seat given to the driver, and for the purposes set forth.

No. 11,043.—Levi Dederick.—*Improvement in Cotton and Hay Presses.* Patented June 6, 1854.

The nature of this invention consists in a peculiar system or arrangement of levers C D F G, by which an equal pressure is given the follower B, so that it will not cant, or one end or part of it be out of a vertical line with the other parts. The levers, also, by their arrangement, have a progressive power as they are operated, the follower at first moving quickly, and gradually decreasing in speed; hepower, of course, augmenting as the speed diminishes.

Claim.—Traversing the follower B parallel by two sets of levers or toggle-joints, with one lever of each set extended beyond the joint of connexion, so as to form a lever to separate the joints; when they are so arranged that the lever of the lower set or joint may work or vibrate between the fulcrum levers of the upper one, the two levers C and D being connected together by a rod or links; the whole being constructed and operated substantially as described for the purposes set forth.

Only one-half of the apparatus is represented in the figure, the other half being exactly similar.

No. 11,044.—Jas. J. Johnston and Jas. V. Cunningham.—*Moulding Hollow Ware.*—Patented June 6, 1854.

This improvement consists in an arrangement of the follow-board B, core-box C, and anchor D.

No. 11,045.—John C. Reed, assignor to C. P. Buckingham, Henry P. Upton, and John C. Reed.—*Improvement in Grinding-Mills.*—Patented June 6, 1854.

The application of metallic cups to the stones, giving stability to the whole arrangement; which allows the employment, in connexion therewith, of a hollow spindle for feeding in the grain. The running stone is also kept in proper equipoise by means of the weights, which slide to and fro in radial grooves on guides back of the stone.

Claims.—1st. The hollow spindle in combination with the metallic cup, through which the grain to be ground is fed, substantially as specified.

2d. The method of balancing and adjusting the bed stone by means of adjustable weights arranged in radial guides, and movable towards and from the centre of the stone, as described.

No. 11,046.—Hervey Ely, assignor to Samuel P. Ely.—*Improvement in Drying Flour.*—Patented June 6, 1854.

The application of a heated air current to the outside of the revolving cylinder in this class of machines is rendered more uniform than heretofore, by regulating the temperature by a thermometer. The great waste of flour attendant upon the use of open cylinders is also avoided by making the ends to revolve in tight boxes.

Claim.—Closing the cylinders or other conveyers at each end, or causing them to revolve in close boxes, as herein described, and for the purpose set forth.

Also, applying to the exterior surface of closed cylinders continuous currents of heated air, so regulated as to keep the contents of the cylinder at a given temperature by an arrangement of dampers L and N, and the observations of the thermometer attached, as set forth. A, hot-air furnace.

No. 11,047.—Thomas Wallace and Eliz. Bacmeister, administratrix of Henry Bacmeister.—*Fan Blower.*—Patented June 6, 1854.

As this improvement is solely upon the shape or form of the revolving fan, the claim describes it sufficiently.

Claim.—The cylindrical revolving diaphragm B, with one or more openings E, for the escape of the air by the combined action of centrifugal force and a partial vacuum.

No. 11,048.—Denis Donovan, [for himself, and as administrator of Witchell G. Hallman, deceased,] assignor to Henry I. White.—*Improvement in Cooking Range.*—Patented June 6, 1854.

The merit of this improvement lies in the hinged flue cover on top of the oven A^1, with the projecting side-pieces containing additional flues.

Claim.—The hinged flue cover, consisting of the hinged cover A^1, side-pieces B B, flue-spaces C^1 C^1, top flue D, in combination with teh valves or dampers C.

Also, in combination with the hinged cover and the valves C, the arrangement of the aperture P for the escape of fumes from cooking.

Lastly, the sliding boiler-plates in combination with the hinged cover and valves or dampers C.

No. 11,049.—ALFRED KRUPP.—*Railroad Wheel-Tires.*—Patented June 6, 1854.

This improvement consists in making car and other wheel-tires out of solid bars of cast-steel, without welding, when slotted, opened, expanded, and finished into the desired form, as shown by figures, so far as can be, without the specification.

No. 11,050.—DOMINIQUE EMILE COUTARET.—*Improvement in the Manufacture of Sulphuric Acid.*—Patented June 13, 1854; patented in England December 16, 1853.

This improvement refers: 1. To a mode of obviating the injurious influence of the hyponitric acid gas present in the sulphuric acid, as it comes from the leaden chambers into the boiler A, by passing a stream of sulphurous acid gas over the surface of the sulphuric acid, in order to cause its combination with the nitrous acid gas to form liquid sulphuric acid, which thus remains in the boiler; and, at the same time, to save the excess of the nitrous acid gas for further production, by returning it to the leaden chambers.

2. To a mode of preventing the inconveniences arising from it, that during evaporation smaller or larger quantities of acid are carried away by steam suddenly evolved, by placing over the evaporating pan G a movable condensing capital H, provided on its inside with a gutter O, in order to admit of a circulation of atmospheric air, promoting evaporation, to prevent the fusion of the lead, and to recondense the vaporized acid, and collect it, by means of pipe I, in J, which otherwise would spread in the laboratory and vicinity.

Claims.—1. The mode of bleaching and purifying, without loss or injurious emanations, sulphuric acid from the leaden chambers, by means of the movable cover, plunging into the liquid sulphuric acid contained in the boiler A, and receiving by a tube the sulphurous gas of the furnace, leaving the surplus nitrous acid gas to escape by the tube, as described.

2. Concentrating sulphuric acid to 66 degrees without loss or injurious emanations, by means of the movable cover H, surrounded by a gutter adapted to the leaden evaporating boiler G, as above described.

No. 11,051.—WILLIAM RUSSEL PALMER.—*Improvement in Threshers.* Patented June 13, 1854; patented in England, April 11, 1853.

The improvements refer to that description of threshing machines in which a series of revolving flails beat the grain against rubbers placed on the vertical sides of the flail case, and consist, first, in the peculiar mill-like furrowing given to the surfaces of the flanches and rubbers, as represented in the drawing; and, second, in the peculiar position they occupy to each other, and their arrangement on the opposite sides of the flail-case, as represented in the drawing; all for the purpose of adapting the machine to thresh all kinds of grain, except Indian corn, and under different circumstances; and also, for the purpose of driving the

grain, while being threshed, alternately from side to side of the flail-case or chamber, and to be acted upon successively by the rubbers attached thereon.

Claims.—1. The peculiar form and construction of the furrowed surfaces of the flanches 2, and rubbers 3, as particularly described in the specification.

2. The combination of such rubbers, which are adjustable, with such flanches and their arrangements as before described, upon the opposite sides of the flail-case; and also, the combination of such furrowed rubbers and flanches, substantially in the manner and for the purposes before set forth, with the rotating flails *d d*.

No. 11,052.—Suspended.

No. 11,053.—Joseph Iler and William Fitzpatrick.—*Cut-Nail Plate Feeder.*—Patented June 13, 1854.

Claims.—1. Giving a rising and falling motion to the end of the nipper-barrel and nose-pieces attached thereto, by means of the cam F, bearing G, and guide-saddle H, in combination with the nipper-barrel B.

2. Constructing the nose-pieces J J with an opening between them, so as to permit the jaws of the nippers *y* to pass into this opening, for the purpose of feeding the scrap-end of the nail-plate as close up to the cutter as possible.

3. The guide *h* and spring h^1 in combination with the nose-pieces J J, for the purpose of guiding and holding the nail-plate in the nose-pieces.

No. 11,054.—Tyler Howe.—*Improvement in Bed-Bottoms.*—Patented June 13, 1854.

Springs are arranged and applied to a rectangular frame, as follows: Thin plates of steel B B, having a proper elasticity, and being about two and a half inches in width, are extended across the frame parallel to one another, and are connected to the frame by means of rocker-links C, there being a rocker-link at each end of the strips B.

Claim.—Combining the main-springs B B together and with the frame, in lateral directions, by means of wire and clasps, in combination with connecting said springs at their ends to such frame by means of rocker-links, all substantially as herein specified, and for the purpose of forming a mattress-foundation of bar-springs, whose parts shall readily accommodate themselves to the varied strains induced by a person's body when laid upon them, and this without injurious strain upon one another.

No. 11,055.—THOMAS ASHCROFT.—*Improvement in the means for controlling the operation of Cut-offs of Steam-Engines.*—Patented June 13, 1854.

Improvement and claim consist in controlling the operation of the cut-off plates or valves c c^1, by means of two inclined planes $f f^1$, one attached to each valve, and the movable stop-bar D, the whole being constructed and arranged as shown.

No. 11,056.—DAVID PREW.—*Improvement in Cast-iron Car Wheels.* Patented June 13, 1854.

Claim.—An improved cast metal chilled rim-wheel, as made, of the combination of a solid or tubular hub, a chilled rim, two undulating plates uniting the hub and the rim, a series of ogee or curved arms, placed between the hub-rim and two plates, and made to connect the hub and rim, and be joined throughout their entire length to the two plates, and a series of openings in one of the plates, and respectively between the arms, all cast or founded in one piece of metal, substantially as described.

No. 11,057.—CASIMIR ABOS.—*Spark Arrester.*—Patented June 13, 1854.

This invention consists in the arrangement of the draught-pipe D, central spark-conducting or return-pipe E, hinged self-closing valve F, and stack A.

No. 11,058.—JOHN M. BATCHELDER.—*Improvement in Insulating Telegraph Wires.*—Patented June 13, 1854.

Claim.—The combination of an electric telegraph wire or conductor with a composition of India rubber and sulphur, forming an insulating coating upon and around the wire; this composition being the same for which a patent was granted to Nelson Goodyear, on the 6th day of May, 1851, and herein referred to.

No. 11,059.—SAMUEL CHILDS.—*Improvement in Stills for Distilling Fatty Bodies.*—Patented June 13, 1854.

The nature of the improvement consists in separating the still from the fire by a stratum of steam, by means of a sort of jacket c c, into which it is introduced by a stop-cock 2, and from which it is led off by pipe e, and passed into the interior of the still; thus protecting the bottom of the still, and at the same time having thereby superheated itself, to serve the purposes of distillation.

Claims.—1st. The use of a stratum of steam within a jacket or case, between a fire-heat and a vessel containing any article, such as oils, fats, rosins, and other similar articles under treatment, whereby the heat applied to such vessels can be regulated to any desired amount, according to the supply and delivery of the steam, as specified.

2d. Passing the steam from the above jacket directly into the still and material under treatment, for the purposes as specified.

No. 11,060.—SILAS CONSTANT.—*Improvement in Lens Lamp-Chimney.* Patented June 13, 1854.

The thickness of the glass used in making lamp chimneys is commonly uniformly the same throughout. In this invention the glass is much thickened at the bulge, so as to reflect and dispose the rays of light more effectually near their point of emission at the burner.

Claim.—Constructing a lamp-chimney, with the bulge so thickened as to form an annular lens for refracting the rays of light, as herein described.

No. 11,061.—NATHANIEL DODGE.—*Improvement in the Construction of Tanning Apparatus.*—Patented June 13, 1854.

This improvement consists in furnishing the tan-vats A with a pair of fulling stocks B C, one at each end, which, by virtue of their vertical, and, with regard to each other, opposite motion, by the cut of the notches *p*, and in opposite direction to the notches *o*, and by the dasher N assuming a horizontal position, while the dasher M hangs down perpendicularly, and *vice versa*, impart, when set in motion, to the skins or hides in the vat a revolving movement, and thus insure a thorough and equal operation of the liquid contained in the vat upon them.

Claim.—The two dashers and sets of notch-bars, as applied to the two vertical and movable frames, and in the vats, and made to operate essentially in the manner set forth.

No. 11,062.—ANTHONY FAAS.—*Improvement in the Construction of Accordeons.*—Patented June 13, 1854.

The improvements consist in combining with the diatonic scale of the large keys two other scales, viz: one for producing all the intermediate notes or semitones, and the other founded upon the subdominant of the diatonic scale; both arranged so as to be fringed by a single set of small keys, to enable the performer to produce full and correct harmony in any key.

This is accomplished by the valves *f f*, etc., of the lower or small keys, which stop two series of apertures, *a a* and *b b*, etc., opening from bellows below. The two series of apertures are alternately opened and closed by means of a wind-stop H, constructed as shown in the figure, with two rows of apertures, arranged in alternate order. These are governed by the levers *h i l m*, jointed to the wind-stop H, and to one another, in the manner shown in the drawings.

Another improvement is in constructing the instrument with a sound-board I, for the purpose of giving more strength, fullness, and resonance, to the tones; and it also facilitates the arrangement of the first

improvement more conveniently, by giving space to arrange the valves, etc., within the instrument, where they are not exposed, adding neatness to its appearance, &c.

No. 11,063.—ELI H. GREEN.—*Improved Carriage Axle.*—Patented June 13, 1854.

This invention consists not in the mere axle, with shifting-screws, nor in having wrought-iron arms, covered with neatly turned cast-iron sleeves, nor with sleeves of any other metal—for this has been done before; but in forming the arms of eight or more sides, fitting into a corresponding hollow of a cast sleeve, the surface of which may be turned for a bearing, which secures greater strength in the sleeve than when the arm has a square section, and presents the advantage over the round arm of holding the sleeve firmly in its position on the arm, and of being shifted, so as to change the bearing surface.

Also, in the combination of the flange *b* on the sleeve with the nut *d* and axle A, which enables the smith to take off the broad washer *x* without cutting the axle.

No. 11,064.—GEORGE P. GORDON.—*Improved Printing Press.*—Patented June 13, 1854.

The operation of this claim is as follows: The paper is placed upon the upper part of the frame A at *z;* motion is given to the shaft F, and the connecting-rod H moves the bed or carriage C, which contains the form, upward and over the paper; when at this point, the toggle J acts against the lower end of the arm I, and forces the upper end of the frame B towards the frame A, and the form is pressed upon the paper, the bed or carriage containing the form remaining stationary during the time the impression is given, in consequence of the eye *e* acting against the spiral spring *f* upon the connecting-rod H, and the upper part of the bed or carriage bearing against the straps *s s;* upon the return or downward motion of the bed or carriage, the nippers *k* hold the printed sheet in its proper place upon the frame until the type is freed from it by the springs *p;* and the fly, by the operation of the cam G, pinion N, and rack O, then revolves a part of a revolution backwards, and carries the sheet around with it, and deposites it upon the fly-board R. As the bed or carriage C passes downward, the sides of the bed bear upon the rollers *j* of the frame K, and the inking rollers *h h* are in consequence lifted from the inking-roller, and bear against the form; and, when the form has passed below the inking-rollers, said rollers, by their own gravity, fall upon the inking-cylinder L, and are again raised from it and pressed against the form upon the upward movement of the bed or carriage. Thus two distributions are given to the inking-rollers for every impression, and the form inked twice, one inking on the downward movement and one on the upward movement of the bed or carriage. The return movement is given the fly M on the upward movement of the bed or carriage.

No. 11,065.—F. M. HARRIS.—*Improved Tail-Board for Wagons.*—Patented June 13, 1854.

This invention consists in the mode of rendering the tail-gate capable of increasing the length of the body of the wagon when lowered to a horizontal position. Also, in the combination of the spring-catches G G^1, eye-strap H I, hinged tail-board D, elbow shaped pieces *d d*, and hooks *c c*, for the purpose of rendering the tail-gate self-locking, and also capable of resting in a horizontal position while unloading, substantially and for the purpose described.

Claim.—The manner of rendering the tail-gate or board capable of increasing the length of the body of the wagon when lowered to a horizontal position. Also, the combination of spring-catches G G^1, eye-strap H I, hinged tail-board D, elbow-shaped pieces *d d*, and hooks *c c*, for the purpose of rendering the tail-gate self-locking, and also capable of resting in a horizontal position while unloading, as and for the purpose herein described.

No. 11,066.—BERRYMON R. HUNDLEY.—*Improvement in Bed-Bottoms* —Patented June 13, 1854.

The object of this improvement is the maintaining the due tension of a bed-cord without the necessity of its removal or the disturbance of the bedding; and the peculiarities of the device over others for a similar purpose are deemed to consist principally in the equable tension, strength, and elasticity of the cord, and the uniform action on every part of it during the process of tightening; and the radial arrangement of the cord, by crowding it towards the middle of the bedstead, presents the requisite amount of effective strength where the most strain is exerted, so that one-third less cord is necessary than where two sets are crossed rectangularly.

Claim.—The ring *a*, provided with hooks or other attachments in connexion with a handle *c* and catch, substantially as described, for the tension of a radial arrangement of the bed-cord.

No 11,067.—BERNARD HUGHES.—*Improvement in Vises.*—Patented June 13, 1854.

Claim.—The method of attaching and using the nut or female screw E at the back of the movable jaw D D, with simple screws *x* through its flange.

No. 11,068.—WILLIAM E. JONES.—*Improvement in Saddle-Trees.*—Patented June 13, 1854.

This saddle-tree is constructed of two plates of spring steel, about two inches in width, with a high pommel and cantle. The bars or plates of steel are riveted together at both ends, with one rivet at each, which is permitted to serve as a hinge, so as to enable the saddle to be adjusted to fit the backs of animals of different sizes.

Claim.—The introduction of a hinge into the pommel, and one into the cantle, in connexion with screws; by means of which the saddle can be made to enlarge and contract, and thus to fit any horse, substantially as described.

No. 11,069.—J. KEECH and S. STILLWELL.—*Improvement in Winnowing Machines.*—Patented June 13, 1854.

The improvement consists in furnishing an ordinary winnowing machine with a removable trunk C, to be inserted vertically in hopper A, provided for the purpose with grooves *a a*, and to rest upon plate L, so as to receive the grain from the hopper through aperture *g* whenever it is thought proper to expose the winnowed grain to an ascending blast.

Claim.—The movable trunk C, for the purpose of converting the open horizontal blast of the ordinary winnowing machine into a vertical blast separator.

No. 11,070.—WILLIAM MONTGOMERY.—*Improved Mode of Making Cards.*—Patented Juue 13, 1854.

This invention consists in forming the card-teeth from a plate or sheet of metal, cut and bent into the form of two triangles, united to and standing with their planes at right-angles to a rectangle.

In the accompanying drawing, the two triangular teeth are seen at *a b*, as arranged parallel to one another, and standing with their planes perpendicular to a rectangular base *c*.

Claim.—The making of each two teeth, and the base thereof, of a metallic plate formed and bent substantially as described.

No. 11,071.—J. V. MERRICK.—*Improvement in Exhaust Fans.*—Patented June 13, 1854.

The exceptionable practice of driving a blast of air in front of or under the grate, as well as that of obstructing the smoke flue with the fan or blower, is avoided by this invention. It is placed with an arrangement of dampers on one side; and whilst it does not, at any time, obstruct the draught, it may be made to aid it to any required amount.

The patentee disclaims the use of suction-blowers for increasing draught in a chimney, as this has been long known.

Claim.—The combined arrangement of the valves L M N O, and the external exhaust-blower E, operating in the manner and for the purpose substantially as hereinbefore described.

No. 11,072.—ANDREW OVEREND.—*Improvement in Printers' Friskets.*—Patented June 13, 1854.

The improvement consists in constructing a metallic frame, notched along its outer sides like saw-teeth, and then stretching longitudinally

and transversely across the frame A B C D elastic strips M N and O P, etc., having at each end a clamp F G and H I, etc. These clamps are indented, and can be slid along the sides of the frisket-frame, or they will remain permanently in any position in which they may be placed. By this means a movable barred frisket-frame is formed, which can be altered or adjusted at convenience, without involving any loss of material.

Claim.—The construction of the movable barred frisket-frames, by the combination of elastic bars, clamps, and toothed frisket-frame, arranged and operating as herein described.

No. 11,073.—CHARLES A. WILSON.—*Improvement in Valves for Steam-Pumps.*—Patented June 13, 1854.

This invention consists in operating the conical valve B by a slotted rod 11, moved by the engine as usual, and a double weighted lever 12, the second or extreme weight 16 being jointed. The slotted rod serves to shut the lever. The lever moves the valve by hitting against studs or jogs of the slotted rod, and then the weights carry the lever and valve after the centre has been passed, the jointed ball or weight preventing the rebound.

Claim.—The double-weighted lever, having one fixed and one jointed weight, for opening and closing the valve instantaneously, without a rebound, at the end of each stroke of the piston.

Also, connecting the slotted rod, or its equivalent, with the valve by means of the weighted lever and the jogs on the valve, to allow the valve to remain stationary until the piston is at the point of finishing its stroke, and then instantly opening and closing them by the weighted lever, the lever turning freely on its fulcrum, causing no motion of the valve thereby.

No. 11,074.—M. NEWMAN 2d, N. C. WHITCOMB, and G. C. COLE.—*Improvement in Couplings for Carriages, etc.*—Patented June 13, 1854.

This improvement consists in the mode of applying and operating the spring button H, for the purpose set forth.

No. 11,075.—DAVID LATOURETTE.—*Improvement in Mills.*—Patented June 13, 1854.

The increased amount of grinding surface which can be brought into service is the chief peculiarity of this arrangement.

Claim.—The combination of the revolving wheel with a roll or rolls, or with a block or blocks, or their equivalents, arranged in any of the ways or for any of the purposes set forth.

No. 11,076.—Bronson Murray, assignor to T. R. Spencer, assignor to J. S. Wright.—*Improvement in Harvester Cutters.*—Patented June 13, 1854.

The improvement and claim consist in making the rear serratures of the sickle-blade B sickle-edged, except the rear projecting points, back of the knife-bar, which latter construction is disclaimed as being the invention of Henry Green.

No. 11,077.—Richard L. Kownover, assignee of David N. Kownover.—*Improved Mode of Closing Wickets in Canal Gates.*—Patented June 13, 1854.

This improvement and claim consist in attaching the rod D with roller I to the wicket-rod C of the canal lock-gate; by means of which the wicket will close when the gate is opened, as shown.

No. 11,078.—Lyman Clark, assignor to Lyman Clark and Joseph Sawyer.—*Instrument for Trimming the Welts of Boots and Shoes.*—Patented June 13, 1854.

This instrument is constructed with a broad, flat guard C, formed by the extension and flattening of the shank *d*. Nearly at right-angles with the guard is the blade *f*, having its cutting edge set at an angle somewhat less than a right-angle with the side of the guard. See figure.

Claim.—The welt-knife, constructed substantially in the manner as set forth, and represented in figures of the drawing.

No. 11,079.—Charles Perley.—*Improvement in Adjustable Rails for replacing Cars on the Track.*—Patented June 13, 1854.

The patentee disclaims the invention of L. B. Flanders; also, the switch in a groove; also, the form of joint.

Claim.—Connecting an inclined groove rail to a shoe or box sitting on the railroad track, by means of a joint, or to an intermediate section or sections, so that said grooved incline *f* can be turned to any position to coincide with the flanch of the wheel, and replace the same on the track, substantially as described.

No. 11,080.—Chares Perley.—*Cable Stoppers.*—Patented June 13, 1854.

This improvement consists in hanging the pawls *e f* on an inclined hinge, attached to the deck *d*, and sustaining them when they compress the cable by the projections into which their upper ends fit.

No. 11,081.—SAMUEL PERKES.—*Improvement in Crushing and Grinding Quartz and Minerals.*—Patented June 13, 1854. Patented in England October 12, 1852.

Powerful conical crushing rollers are driven by bevel gearing, reducing the mineral masses to fine dust; this being mixed with water and mercury, the separation of the earthy from the metallic constituents is economically and expeditiously effected.

The patentee does not claim any of the parts when separately considered.

Claim.—The combination of the vessel *a*, the trough *c*, the conical crushing roller *j*, the hollow axis K, and the arrangement for applying water, substantially as herein described.

No. 11,082.—MERRITT F. POTTER.—*Improvement in Railroad Odometers.*—Patented June 13, 1854.

The patentee does not claim transferring the motion of the axle by means of the endless screw.

Claim.—The arrangement by which the pinion *h*, upon the upright shaft *g*, attached to the car, is adapted directly to the axis J itself, so that while the rotation of said axle causes a revolution of the pinion through the endless screw *k*, the endwise movement of the axle, in turning the curves, acts upon the pinion, so as to move it independently of the rotation of the screw, in the same or opposite direction, according to the course of the curve, the screw exceeding in length the arc of the circle through which the axle would move.

No. 11,083.—EBENEZER N. PRICE.—*Improvement in Bridle Bits.*—Patented June 13, 1854.

This improvement consists in extending from each of the bars *a a*, forming a common bridle bit, a nipper or jaw *b*, so as to project rearward from the bit, and against the sides of the lower jaw of the animal, when the bit is placed in the animal's mouth. The nippers or jaws are short pieces of metal, about three inches in length, permanently riveted to the bit, and they may each be provided with an eye or hole at the rear extremity, for the reception of a chain, or leather strap.

Claim.—The improvement of making the bit with the nippers or jaws, made to operate against the jaw or under lip of a horse.

And in combination with the nippers or jaws, the strap, as applied to them, and made to operate with them, substantially as specified; not meaning to claim a strap, or its equivalent, separate from the jaws, nor its application to the bars of a common bit, but meaning to combine it directly with the nippers, so as not only to keep them from spreading outwards, but to preserve the bit in place, or prevent it from rising too high in the mouth of a horse, essentially as specified.

No. 11,084.—I. SPARKS and L. PERRIGO.—*Spoke Machine.*—Patented June 6, 1854.

The improved device for holding the piece while being operated on by the revolving cutters *e*, as seen in figure. This clamp is operated by the tail screw at C. The spring *c*, upon relaxing the screw at C, forces the round part *a* through a hole in the head stock B, and allows the piece to be turned by the hand to any required position; and the square part *b* being forced by a screw at C with the head stock B, retains it in position.

The claim is to this device.

No. 11,085.—JAMES L. ROWLEY.—*Riding Vehicles.*—Patented June 13, 1854.

This alleged invention consists in the combination and arrangement of the spring-reach with the swivel-joint coupling, by means of which greater ease and comfort are obtained.

Claim.—The employment of a spring-reach, in combination with a swivel-joint on the front end of the same, substantially in the manner set forth.

No. 11,086.—IRA REYNOLDS.—*Improvement in Harvesters.*—Patented June 13, 1854.

The improvement refers, 1st, to the cutters, which are arranged on a bar *k*, along the whole front of the platform, in pairs; each pair consisting of an upper, o^1, and under blade, t^1, pivoted separately by screws r^1 s^1 to bar *k* in their centre, and supported at their rear ends by bars i^1 and h^1; said bars, when set in reciprocating motion by levers *i i*, impart to the blades a shear movement extending each way, so as to make every blade form a scissor alternately with each of the two blades of the opposite range, and thus to insure the cutting of every grain-spire passing between them.

2d. To the mode of working the reel *t y z*, consisting of an endless slat-apron, by means of lever d^1, and from the driver's seat *d;* for the purpose of accommodating the elevation of its forward extremity *y* to the height of the standing grain or grass.

Claims.—1st. The arrangement of a double series of double edged shear-blades, supported at their rear ends by the reciprocating bars to which they are pivoted and regulated by temper screws, substantially as and for the purposes set forth.

2d. The grain gatherer, so arranged that its forward portion can be elevated or depressed from the driver's seat without stopping the machine, substantially in the manner and for the purposes set forth.

No. 11,087.—CHARLES SCHINZ.—*Improvement in Processes for Hardening Tallow.*—Patented June 13, 1854.

The improvement consists in using the nitrate and the sulphate of ammonia for the purpose of hardening tallow, in lieu of using the

nitrous or sulphurous acids directly; which substitute, besides being cheaper, is alleged to better retain the acids within the solution during the operation. The solution of the nitrate or sulphate of ammonia to be used, has to be of such strength as to contain effectively two pounds of nitrous or one pound of sulphurous acid to every 400 pounds of tallow under treatment.

Claim.—The use of either the nitrate of ammonia alone, or conjointly with sulphate of ammonia, for the purpose of hardening fats used for the manufacture of candles, as described. No illustration.

No. 11,088.—JOHN STOWELL.—*Steering Apparatus.*—Patented June 13, 1854.

This improvement consists in the application of the curved sectoral rack D, and the rest of the steering mechanism, direct to the rudder-head A, so that such can rise and be elevated or depressed by the rudder-head, in combination with supporting the rack upon the deck by posts E E, formed with shoulders F F.

No. 11,089.—PETER SWEENEY.—*Steam-Boiler.*—Patented June 13, 1854.

Claim.—Dividing the interior of the boiler by an annular casing B C, filled with non-conducting material, or by a non-conducting tube *o*, so as to form an external water space *c*, which exposes a thin body of water to the action of the fire, and an inner or central cylinder C, in which the water is kept at a comparatively low temperature.

No. 11,090.—WILLIAM SHOVE.—*Improvement in Buckles.*—Patented June 13, 1854.

The nature of this invention consists in connecting the two ends of the bow of the buckle together by means of a dovetail *b*, and perfectly securing said dovetail, or preventing it from being disconnected or separating, by having the "cone," or end of the tongue, which is secured around the base of the bow, pass around and clamp the dovetail, as will be apparent by reference to the annexed figure.

Claim.—Making the union of the two ends of the buckle bow by a common dovetail joint, which by itself resists tension lengthwise, and which requires only the common tongue to hold it in permanent connection.

No. 11,091.—E. H. SPRAGUE.—*Improvement in Locking up Printers' Forms.*—Patented June 13, 1854.

Claim.—The manner of locking and unlocking printers' forms in the chase by means of tapering bars D C, and intermediate wedges E, extending lengthwise and crosswise of the chase on the side and end, and operated by a hand-lever G, by which the composer is enabled to dispense with the usual sticks and quoins.

No. 11,092.—Thomas Silver.—*Improvement in Tightening Windows.*—Patented June 13, 1854.

This improvement consists in the arrangement and combination of the swell or lateral bearing C C with the oblique ball B B, represented in the drawing; thereby producing an opposite bearing of the sash on the window-frame near the top of the sash, which bearings tighten the sash when in one place, and thus prevent shaking and the production of noise or rattling.

No. 11,093.—David I. Stagg.—*Controlling Plurality of Doors with one Key.*—Patented June 13, 1854.

This improvement and claim consist in combining with double lock-bolts *h*, or double-acting lock-bolts *s*, on the doors, the sliding-hasps *a*, constructed and operated as shown.

No. 11,094.—G. B. Simonds & Abel Breaer.—*Spark-Arrester.*—Patented June 13, 1854.

Claims.—1st. So arranging the conical deflector D, in the upper part of the case A, and in relation to the flange E, which is around the draught-opening and extends down inside from the top of the case, that the exhaust-steam will be caused to act upon the sparks, and force them into their chambers, substantially as described.

2d. The employment of the elliptical-shaped cone D, within the elliptical case A, in combination with the spreaders G G.

3d. Regulating the escape of the sparks by means of the adjustable flange E, arranged round the discharge opening.

No. 11,095.—Henry C. Sergeant.—*Feed-Water Apparatus for Steam-Boilers.*—Patented June 13, 1854.

The claims indicate the improvement.

Claims.—1st. The combination of the balance-valves F F, float K, and valve H, all arranged within, or applied, substantially as shown, to the box A, connected with the boiler and a reservoir.

2d. The cup I, sunk below the pipe D, which supplies the box with water, or otherwise applied inside of the valve H, for the purpose of receiving and retaining a small quantity of water every time the box is charged, for the purpose of facilitating the condensation of steam.

No. 11,096.—Thomas, Earl of Dundonand.—*Improvement in Composition for Coating Telegraphic Wires, and for other purposes.*—Patented June 13, 1854; in England October 6, 1852.

The ingredients to be used, and their proportions, are described as follows: 10 parts of shellac, 4 to 5 parts rosin, 1½ part of viscid oil of petroleum, or equivalent—all by weight. To give the compound elasticity, about 15 parts of India rubber; and to give it permanency, as-

phaltum, or mineral pitch, is to be added, to suit the purpose for which the composition is intended. If intended for embankments, water-pipes, tanks, and the like, sand and gravel may be added.

Claim.—The combination of gum shellac, rosin, tar, the unctuous oils, or the viscid oil of coal tar, bitumen, asphaltum, or mineral pitch, and India rubber, for the coating and insulating telegraph wires, and for other purposes, as herein set forth and described, or any other specifically the same. No illustration.

No. 11,097.—T. CHALKLEY TAYLOR.—*Improvement in Soap Compounds.*—Patented June 13, 1854. Patented in England September 17, 1853.

One pound of bran of cereal grains is mixed with two gallons of an alkaline solution of about 1.08 specific gravity, stirred occasionally, and after three hours, strained. This composition is in itself a soap, or it may be used as an ingredient in the manufacture of hard soap, or be boiled up with soap already made.

Claim.—Dissolving the bran of cereal grains in caustic alkali, and using the product as a substitute for, or as an ingredient in, the manufacture of soap, substantially as described. No illustration.

No. 11,098.—T. CHALKLEY TAYLOR.—*Improvement in Soap Manufacturing Processes.*—Patented June 13, 1854.

An alkaline solution of from 10 to 15 degrees by hydrometer is warmed, and potatoes or similar vegetables added to it, in the proportion of about fifty pounds to eight gallons of the solution; when the whole is boiled until it forms a uniform creamy mass. Grease, rosin, or other materials used in soap making, may now be added, and the process completed in any known manner.

Claim.—The process herein described of treating by alkali, in a cold or tepid state, potatoes with their skins on, in the manner and for the purposes set forth. No illustration.

No. 11,099.—ANTHONY VITTALY and CARL KOLB.—*Improved mode of Fastening Shoemakers' Tools to Handles.*—Patented June 13, 1854.

Claim.—Securing the tool E to the stock or handle A, by means of a screw-rod, block, or collar, and a dowel-pin, constructed and arranged as set forth in specification.

No. 11,100.—GEORGE YATES and ELI CLAYTON.—*Improvement in Looms.*—Patented June 13, 1854.

The object of this invention is to prevent the shuttles, reeds, or temples from being broken in case of any obstruction, or when the thread of the web is broken.

The invention is an improvement upon the contrivance of H. T.

Robbins, patented September 14, 1852; mainly intended for the same purpose.

In the drawing, A is the shuttle, having a groove and flange on its upper side corresponding with a groove in the lathe-cap B. The shuttle passing to and fro is prevented from flying out by the edge; when the shuttle rises over cross-threads or other obstructions, it immediately fastens into the groove of the cap, which keeps it in its proper course, and thus the edge D of the groove in the shuttle, and the edge C of the groove in the lathe-cap B, acting against each other, prevent the shuttle from flying out.

Claim.—An improvement upon the contrivance of Robbins, which consists in the grooved shuttle in combination with the grooved lathe-cap.

No. 11,101.—JOHN BEVAN.—*Improvement in Railroad-Car Ventilators.* Patented June 13, 1854.

The object of the invention is to prevent the entrance into railway cars of dust, cinders, or other bodies suspended in the air through which such cars are passing swiftly, and at the same time to constantly renew the atmosphere and provide for their ventilation.

Claim.—Arranging on either side of a suction fan-blower, and on the same shaft with the same, a series of revolving separating blades E F, or their equivalents, for the purpose of creating a strong revolving current of air above the top of the car, which acts centrifugally upon the cinders, dust, and other heavier particles than air accompanying the current created by the rapid motion of the cars, and causes them to be deflected, and to fall to the ground instead of entering the car; while the fan-blower acts centrifugally upon the air thus separated or stripped of its impurities, until it enters the blower, and then causes it to pass into the car and ventilate the same agreeably, and in a very perfect manner; the whole being constructed, arranged, and operated in the manner substantially as herein described.

No. 11,102.—JAMES WIGHTMAN.—*Steam-Boiler.*—Patented June 13, 1854.

This improvement consists in the arrangement of the arch or roof A of the fire-box extending through to the uptake H, and connecting with a counter-arch C in such manner as to form an elliptical flue to form a communication between the furnace and uptake, in connexion with a series of small return flues G above the roof of the fire-box and elliptical flue, and in a curve concentric therewith; so that the upper side of the highest flue will be at the same distance, or thereabouts, below the upper surface of the water within the boiler, whether the latter be upright as when a vessel on which it is placed is on an even keel, or inclined, as when the vessel is careened, substantially as set forth herein.

No. 11,103.—G. W. Wood and L. O. Webster.—*Improved Canal-Lock Gates.*—Patented June 13, 1854.

This improvement consists in the combination and arrangement of the shackle bars H and I, the levers M and N, and their attachments and fixtures, as described, by means of which the opening and closing of the gates are facilitated, and the means of re adjustment are provided, whenever any derangement shall take place, without being obliged to separate or remove the fixtures.

Claim.—1st. The hooked form of the levers M and N, and the curving of the shackle bars H and I. 2d. The adjustable lever box, including the mode of adjusting the valve-rods and tightening the valve-gates by screws or their equivalent. 3d. The combination of the hooked levers with the curved shackle bars, and the adjustable lever-box, as described, and for the purposes described; the whole being constructed and arranged substantially in the manner and for the purposes above set forth.

No. 11,104.—G. Westinghouse.—*Improvement in Endless-Chain Horse-Power.*—Patented June 13, 1854.

The claim distinctly sets forth the nature of this improvement.

Claim.—The construction of the gearing substantially as herein set forth, having a pinion permanently affixed on the ends of each shaft, to either of which the hubs of either the driving or band-wheels fit and are fastened.

No. 11,105.—Joseph Weight.—*Improvement in Machinery for Napping Cloth.*—Patented June 13, 1854.

This invention relates to a new and useful machine for raising a nap on cloth, and consists in the employment of an endless card-sheet in combination with a transverse card-belt.

Claim.—The combination of the endless card-sheet C and the endless transverse card-belt E, arranged and operated as described.

No. 11,106.—Edmund Victory, assignor to D. M. Linsley and George Goulding.—*Improvements in Machinery for Spinning Wool.*—Patented June 13, 1854.

This invention has reference to a well-known arrangement for drawing and twisting simultaneously the sliver or rover of a revolving head, through which the sliver passes, carrying drawing-rollers in front, said rollers revolving with their head as well as rotating on their own axis. In the accompanying drawing, A is the revolving head, placed immediately behind the rollers *a a*, which conduct the roving to the flyer. It consists of a short cylinder, with a concentric tube *b* at the back, which is fitted to work in bearings. The sliver is taken from a spool by a pair of rollers *o o*, which revolve at a slower speed than the drawing rollers *c c*, and the latter are thereby made to draw or stretch it, while the

motion which is given to the axis of the rollers by the revolution of the head A gives a twist to the thread; thus the thread between the rollers *o o* and the rollers *c c*, is drawn and twisted at the same time. After passing the rollers *c c*, the thread is conducted by the rollers *a a* to the flyer *i*, by which the final twist is given.

The patentee disclaims the employment of drawing-rollers revolving with the head, and made, in addition, to rotate at a suitable velocity on their own axis, for the purpose of drawing and twisting the sliver or thread, as such have been before used.

Claim.—Arranging the drawing-rollers to operate as specified within the revolving tube or head, while the head is sustained by a sufficient bearing on its whole circumference outside of the said rollers, as described; whereby the double movement of the drawing-rollers, on their own axis and with the head, is rendered perfectly steady, and that vibration prevented which tends to produce an uneven thread.

No. 11,107.—EDWIN ALLEN.—*Machine for Polishing Veneers.*—Patented June 20, 1854.

The veneer P is passed beneath the roller K, and is polished by the moving-belt I, which has on its surface sand-paper. The cylinder K is constructed of India-rubber cloth, and partly filled with water, thus enabling it to press the belt against any inequalities of the veneer. This pressure-cylinder has no bearings, and is kept in place by two rollers J.

Claim.—The combination of the cylinder K with the belt I.

No. 11,108.—JOHN ALLENDER.—*Grommet for Sails.*—Patented June 20, 1854.

This improvement consists—

1st. In making that portion of the tube put through the ring E to correspond with the corners of the canvass or cloth, so that when they are bent down upon the canvass, they double or bend it over the edge of the ring, and there confine it.

2d. The scores F in the ring, which correspond with the corners of the cloth and with the points of the tube, in combination with the points of the tube.

3d. Scoring or roughening the surface of the rings A and E, where they come in contact with the cloth.

4th. Making or inserting points D in or on one or both of the rings, to extend through the canvass into the opposite ring.

5th. Riveting the points of the tube which are bent over on the cloth, or otherwise, substantially as described.

No. 11,109.—D. C. AMBLER.—*Improvement in Quartz Crushers.*—Patented June 20, 1854.

The novelty here introduced into this class of machinery consists in making use of the gravitating force of the balls, as well as their fric-

tion upon the substances to be pulverized—the object being effected by attaching the balls, as claimed, to shafts, so as to impart their peculiar motion.

Claims.—1st, the combination of a revolving trough, with balls located therein, said balls being attached to shafts substantially as herein described, whereby quartz, or other similar substances, may be stamped, crushed, and pulverized.

2d. The combination of a revolving trough with balls revolving therein by friction; but this is claimed only when these balls are attached to shafts, substantially in the manner herein specified, whereby quartz, &c., may be pulverized and crushed, as herein specified.

Nc. 11,110.—D. C. AMBLER.—*Improvement in Setting Steam-boilers.*—Patented June 20, 1854.

This improvement consists in having a grate-surface *f f*, extending the whole length of the boiler, when the same is employed in connexion with a midriff location, as shown, and causing the products of combustion to traverse in reverse directions. Also, in the use of the tiles *h h h*, located as shown, and for the purpose of forming the midriff *m*.

No. 11,111.—GABRIEL BLONDIN.—*Improvement in Process for Treating Paint.*—Patented June 20, 1854.

The improvement consists in preparing the pigments usually employed in distemper painting, with dry albumen uncoagulated, and such as is usually found in commerce in a dried state.

The proportion is about 1 part of albumen, by weight, to 18 parts of pigment, using less for the crystallized, and somewhat more for those of globular form. As soon as the color thus prepared is applied and gets dry, it is passed over with alcohol, a jet of steam, or any other coagulating agent, provided the latter be not apt to decompose, to bleach, to stain, or otherwise to injure the painting. The albumen, thus coagulated, protects the color againt the influence of air and moisture. The painting may be washed and cleaned with soap, and, if varnished over, assumes the appearance of oil-paint.

Claim.—The hardening and fixing of paint of which albumen is a constituent, by coagulating the albumen after the paint has been spread, substantially as herein set forth. No illustration.

No. 11,112.—GABRIEL BLONDIN.—*Improvement in Paint Composition.*—Patented June 20, 1854.

The improvement in this composition consists in the admixture, to the usual pigments employed in distemper painting, of dry uncoagulated albumen, in the proportions, and for the purpose, stated above, [No. 11,111,] thus giving origin to a new product useful in the art of painting

Claim.—To the described product, as such. No illustration.

No. 11,113.—Frederick H. Bartholomew.—*Method of Governing the Action of Valve-cocks.*—Patented June 20, 1854.

This invention is to provide a governor to the valves of cocks adapted to the purposes of water-closets, by means of which the valves may be made to open or close gradually, and while opening or closing to admit a limited supply of water to pass through, and thus avoid the necessity of employing any cistern, or reservoir of water, below the main supply and basin.

Claim.—The method specified of controlling the motion of a valve by means of a variable chamber S S combined therewith, the chamber having a small opening M, or T, communicating into it, through which the chamber shall fill or discharge, and thus govern the opening and closing of the valve E.

No. 11,114.—Thomas H. Barlow.—*Cut-Nail Machine.*—Patented June 20, 1854.

This improvement consists in combining with the pairs of fixed stocks and cutters K J, the vibrating stocks and cutters H I, when said vibrating stocks and cutters are so arranged as to be capable of being operated from one rock-shaft C, by one cam D, and lever F, and the pair or sets of stocks constitute the griping-jaws.

Also, in combining with the vertical oscillating mail-plate holder the escapement U, for the purpose of gauging and feeding up the mail-plate.

Also, operating the mail-plate holder from the heading levers through the medium of the arms T, sliding-bars S, lever V, and escapement U.

No. 11,115.—Mark S. Bassett.—*Flour-Sifter and Renovator.*—Patented June 20, 1854.

This invention forms a useful household utensil, in which radial rollers, actuated by a vertical shaft, break up lumpy meal or flour, force it through a coarse sieve to a set of brushes fixed to the same shaft, and during this last operation all coarse particles and impurities are separated, by forcing the flour through a fine sieve.

Claim.—The arrangement of the radial rollers *a a*, and horizontal brushes, with the coarse and fine sieves *m* and *n*, for the purpose of renovating damaged and lumpy flour, in the manner herein set forth.

No. 11,116.—Joseph Bone.—*Improvement in Grain Winnowers.*—Patented June 20, 1854.

The improvement consists in so constructing two or more blast or suction-spouts of a winnower—as, for instance, in the drawing, the passages B^1 I^1 and passages B^2 I^2, with hoppers A K, L, and N—as to enable the operator either to permit the grain originally fed at A, and then passing successively through B^1 I^1 and K, when arrived at the hopper L, to escape through the bottom of the spout B^1,

or, by dropping shute M, to divert it again through hopper N into hopper A, and from the latter into spout B^1, to undergo a repeated cleaning, as often as desired.

Claim.—The arranging and connecting of a series of two or more sets of separating passages, substantially as set forth, so that the grain may be carried through the entire series as often as required for thorough cleaning and separation.

No. 11,117.—Benjamin Crawford.—*Improvement in Steam-Engines.*—Patented June 20, 1854.

The claim allowed indicates the invention.

Claim.—The method of producing a vacuum in condensing engines, by allowing a part of the exhaust steam to escape into the atmosphere, without resistance, by a flap-valve *b*, before the condenser is opened, and then condensing the remainder by opening the communication between the cylinder A and condenser C.

No. 11,118.—Thomas Crossley.—*Machine for Printing Woollen and other Goods.*—Patented June 20, 1854.

The carpet or other fabric to be printed is fastened by hooks to the endless chains F, which, in motion, are forced apart by divergence of the ways upon which they travel, and the fabric to be printed is thus evenly stretched, preparatory to being printed.

The chain, having moved a distance equal to one block, stops; while this is taking place, the pin in the crank is passing through the curve in the section X, the blocks remain motionless over the cases H^1, and the latter are raised through the operation of the cam A^1; the color is thus given to the block. The crank-pin now enters the straight portion a^1 of the cam-groove W, and the blocks are carried in with a slow motion. The cam-shaft E continuing to revolve, the cams Q force down the followers N^1, which, in turn, bear upon the studs *p*, in the centre of the plates S, to which the printing block is secured; thus the impression is made. The motion being continued, the fabric is passed from one block to the next, receiving an additional color and impression from each, to any desired extent.

No. 11,119.—Benjamin F. Day.—*Double Cylinder Engine.*—Patented June 20, 1854.

This invention consists in expanding and non-expanding cylinders.

Claim.—Interposing between the first and second cylinders a steam-chest E, with valves F F, for controlling the passage of steam from the first to the second cylinder.

No. 11,120.—Samuel Fay.—*Improvement in Weaving Double Cloth.*—Patented June 20, 1854.

This invention consists in uniting two warps—the one of cheap, strong material, for a foundation, the other of wool for the finished sur-

face—by two weft threads, one of cheap material and the other of wool, in such a manner as to keep all the wool on one surface, and all the linen or cotton on the other surface, without permitting any portion of either warp to pass entirely through the other to the surface.

Claim.—The manufacture of a fabric which has one face of wool, and the other of cotton or linen, in such a manner that in no place does the warp which is upon one side of the cloth extend into the surface of the other side of the cloth. No illustration.

No. 11,121.—F. A. GLEASON.—*Improvement in the construction of Reed Musical Instruments.*—Patented June 20, 1854.

The improvement consists in forming vibrating air-chambers F under each reed to increase the volume of sound, and in arranging a small hammer G within each of these recesses, so as to strike the reeds, causing instantaneous sound; also, in constructing a series of chambers H above the reeds, to soften the sound, each chamber having an outlet for the wind at *f*.

Claim.—The hammers G, arranged in each vibrating air-chamber, in connexion with a wire-spring and valves; also, in combination with it, the vibrating air-chambers F under each reed, and the modulating air-chambers H, with the small apertures *f* over the reeds, all arranged and operating as described and represented, and for the purpose substantially as herein before specified.

No. 11,122.—G. W. GRISWOLD.—*Tool Handle.*—Patented June 20, 1854.

Claim.—So combining a double-acting pawl, and a star-shaped ratchet, with the stock and handle of a screw-driver, or its equivalent, that by pressing the finger on one arm of the pawl, and turning the handle, a screw may be driven into the wood; and by pressing the other arm of the pawl, and continuing to turn the handle in the same direction, the screw or gimlet may be withdrawn.

No. 11,123.—CHARLES S. HARRIS.—*Improvement in producing Continuous Circular from Reciprocating Rectilinear Motion.*—Patented June 20, 1854.

The patentee does not claim a rack and pinion, or the duplication of the same, or a combination of two racks and pinions, or two racks and a semi-pinion, so applied as to produce circular motion from rectilinear motion; nor does he claim the combination of a bow and string or band with a pulley, for obtaining a circular motion from a rectilinear motion, nor the mere duplication of such devices.

Claim.—The so combining with the bow or bar D, and the two bands E F, and the handle I, or its equivalent, a vibratory or rocker lever G, that during the reciprocating rectilinear movements of the bar or bow D, caused by the power applied to such rocker bar, it shall be made to operate so as to alternately tighten and loosen each cord upon the pulleys of the drill-stock, as specified, and so cause the drill-stock to be rotated as described.

No. 11,124.—JOHN HENRY.—*Improvement in Cast-Iron Car Wheels.*—Patented June 20, 1854.

The patentee does not claim a central plate running from the hub to the rim, and not connected with the inner and outer plates, as such a wheel has been patented by Frederick Harback, November 6, 1847.

Claim.—The intermediate continuous plate *e*, extending diagonally from the hub to the rim, in a cast-iron wheel having double plates or disks, and connecting the two plates of the wheel together, substantially as described.

No. 11,125.—FREDERIC HOWES.—*Extra Yard to Top-Sails.*—Patented June 20, 1854.

This improvement consists in applying and supporting an extra top-sail yard, as shown by the drawing.

Claim.—The application of an extra yard, supported by truss, crane, or brace, as herein described, or any other substantially the same, and which will produce the same effect.

No. 11,126.—SOLOMON T. HUNTINGTON.—*Carriage Tops.*—Patented June 20, 1854.

This invention consists in supporting the top by means of an inverted bow *c* attached to the back of the seat, which can be readily detached from the catch in the back, in connection with the extension of the jointed brace *e* forward, so as to form a handle or lever within reach of a person sitting on the seat, whereby the top may be lowered or raised at pleasure.

No. 11,127.—NATHAN JOHNSON.—*Improvement in the mode of making Bricks.*—Patented June 20, 1854.

The mortar is distributed at once from the mill into the moulds, and the moulds filled, and surplus mortar struck off by means of a "lute."

The patentee disclaims in general the forming of bricks from mould frames placed upon the ground, as herein described, this having been done before.

Claim.—The mode of at once distributing the mortar, filling the moulds, and removing the surplus material, namely: by means of the lute, applied as herein described.

Further, that with them bricks can be made without the assistance of off-bearers, and at one fourth less expense than can be made in any other way.

No. 11,128.—CHARLES C. LLOYD.—*Improvement in Gas Meters and Regulators.*—Patented June 20, 1854.

The nature of the improvement consists in so constructing the valve P P^1 with its valve seat, as to preserve by its form both the purpose of equalizing or regulating the pressure of the gas within the meter, and

of shutting off the gas when the meter gets too low, and, at the same time, to be actuated by one single float only within the meter; two effects which could not be obtained heretofore but by the employment of two separate valves and two floats.

In the drawing, the position of the float K and lever O, the water-line being at the normal height *a b*, is indicated by continuous, and the position of the same during an undue depression or elevation of the water-line, by dotted outlines. The lever O being pivoted at S, and pitman Q connecting it with valves P P^1 being pivoted to it at R, it is apparent that the maximum of the supply of gas to the meter through pipe J takes place while the water-line *a b* is at its normal height, and is diminished or stopped up entirely at every fluctuation of this line either way, until the normal height is again restored.

Claim.—The application of the principle or mode of operation herein described, whereby the double purpose, above stated, is effected by combining the valves with one and the same float, all within the meter, substantially and for the purpose as herein described.

No. 11,129.—JOHN L. MARTIN.—*Improvement in Painters' Brushes.*—Patented June 20, 1854.

The nature of this invention consists in providing the bristles of the brush with an elastic binder, to extend from their connection with the handle, and around the pack, and down to the print or working end of the brush.

Instead of employing an inelastic thread or wire, as heretofore used, an elastic tubular binder is made of vulcanized India rubber, or other suitable material.

Claim.—The improvement above described, namely, the application of an elastic tubular binder to a brush, instead of an inelastic cord or binder, as commonly used, the said elastic binder being composed of caoutchouc, or other suitable material or materials.

No. 11,130.—THOMAS G. MCLAUGHLIN.—*Improvement in Radial Arms for Car Brakes.*—Patented June 20, 1854.

The patentee does not claim the means for raising radial arms to operate the brake of a tender.

Claim.—The employment of the radial arms A, in combination with the catches or lips J formed on the radial arms A, for the purpose of relieving the horizontal shaft B, on which the radial arms A are firmly secured, of the pressure or force which may be exerted against the ends of the radial arms A, when operating the brakes of the several cars in a train, by the means that have been heretofore invented for the purpose.

No. 11,131.—D. E. MCDOUGALL.—*Burglars' Alarm.*—Patented June 20, 1854.

In the drawing, M represents a cylinder to contain a charge of gunpowder. A clamp C is placed against a door, and another, A, on the

floor, where it is held by the points *a a a*. The dog H is adjusted by the screw J, and when pressed disengages the hammer F, which explodes the powder, and thus gives the alarm.

Claim.—The clamp C, brace B, guard D, the hammer F, the spring G, and dog H, as constructed and arranged.

No. 11,132.—ANSON MERRIMAN.—*Steam-Engine Regulator.*—Patented June 20, 1854.

Claims.—1. To the chamber *g*, cock *m*, safety-valve *n*, holding a portion of steam in store, and, in combination with the pump, drawing from and returning it to the same source, and acting on the piston E during the dead-points of the engine.

2. The aperture *m*, chamber *g*, and safety-valve *n*, so weighted as to hold the steam at greater pressure than in the boiler, in combination with the pump or pumps for forcing the steam into the said chamber *g*, for forming a magazine to feed the cylinder F at the moment the engine is passing the dead-point.

No. 11,133.—NATHAN S. MATHEWSON.—*Improved Watch-Chain Swivel.* Patented June 20, 1854.

The hook A is constructed of one piece of metal, swivelled at the part D. The spring-slide C, containing the opening section B, is made to fit over a square portion *c*, above which it is to be raised and turned when the hook is to be opened; and when closed, the spring pressing the square opening of the slide C, over the squared part *c* of A, prevents liability to accidental disengagement.

No. 11,134.—E. MORRIS.—*Slate Frame.*—Patented June 20, 1854.

Two pieces A, each containing a half-groove for the slate, are formed, with the grain in one at right-angles to the grain in the other. These are glued together, holding the slate between them.

Claim.—Constructing a slate-frame of corresponding halves, of such a shape that a single joint combines them with each other, at the same time that it firmly secures the slate between them, substantially as set forth.

No. 11,135.—ORWELL H. NEEDHAM.—*Improvement in Breast-Pumps.*—Patented June 20, 1854.

This apparatus consists of a bellows-pump *b a*, a flexible tube *c*, a bulb-tube *d*, with perforations at *f*, to be closed by the finger, and opened to admit air when the action of the pump creates pain, and a flexible nipple-shield. A modification is employed for cupping. The separate devices are not new.

Claim.—The combination of an air-pump, operating substantially as above described, with a nipple-shield, or cupping shield, made of flexible material, substantially in the manner and for the purposes set forth,

by means of a flexible tube; so that the motion of the working of the pump will not be felt upon the parts operated upon, so that the patient can operate it herself, and regulate the action in a manner never before effected.

No. 11,136.—J. P. Osborn.—*Turning Bodies of Barrels, &c., out of Solid Blocks.*—Patented June 20, 1854.

The bodies are cut from blocks without injuring the cores, by means of knives D D^1, connected with cross-head E E^1, and revolved by a belt over pulley M. The fixed knives D D^1 are adjustable for different sizes by means of notches F F^1; and as the two mandrels *c* c^1 are caused to approach each other, the core is cut from the block, and the outside turned also.

Claim.—The tool-bearers D D^1, cutting in contrary directions, in combination with the cross-heads E E^1; also, the combination of these cross-heads with the connecting-rods R and feed-screws I; and also the method, substantially as herein described, of adjusting the position of the tool-bearers D D^1.

No. 11,137.—Charles Parker.—*Improvement in Cast-Iron Vises.*—Patented June 20, 1854.

Claim.—Casting the movable jaw or chap of a vise so as to enclose or secure, by the operation, one or more wrought-iron bars *b* within the tail or guide-rod at or near the point of greatest strain, said bars being enlarged or bent at the ends, the better to secure the same to the castings, in order to act as a chord or chords to resist tensile strain, and thereby secure the maximum of strength with the minimum of metal, as described.

No. 11,138.—Benjamin F. Reimer.—*Improvement in Railroad-Car Brakes.*—Patented June 20, 1854.

A sliding-frame A operates all the brakes at once, while by means of the lever K each brake can be operated independently.

Patentee does not claim the mode of operating all the brakes simultaneously.

Claim.—The brake, consisting of the perpendicular rod E, the guides G G, the rollers C C, the chain D, and the mode of attachment; the whole being arranged substantially as above described, for the purpose of operating either by the mechanism for acting simultaneously upon all the brakes in the train, or independent of the same, by the lever K.

No. 11,139.—Jesse Reed.—*Windlass for Ships.*—Patented June 20, 1854.

This invention consists in the arrangement of the movable capstan A, with the two windlasses G G^1, as shown.

Claim.—This arrangement, that either windlass may be operated in either direction, by operating upon the single capstan.

No. 11,140.—S. Brockway Robinson.—*Machine for Drying Grain.*—Patented June 20, 1854.

This machine includes an arrangement of devices for more effectually drying grain than heretofore, the various parts being indicated in the claim.

Claim.—In the above-described machine for drying grain and other articles, a trough or cylinder with a perforated bottom, provided with a conveyor or stirrer, in combination with a blast of heated air forced through the perforated bottom above mentioned, constructed and arranged substantially as described, and for the purposes set forth.

The figure represents a top view of the apparatus.

No. 11,141.—Warren Shaw and Parley G. Green.—*Improvement in Tentering Cloth.*—Patented June 20, 1854.

The nature of this invention consists in the combination of the adjustable, obliquely situated tenter-wheels G G, provided with laterally playing tenter-points *j j*, with the oscillating guides *i i*, arranged and operating in such a manner as to seize the cloth and stretch it uniformly, at the same time bringing its edges perfectly even and straight, in which condition it is delivered to the tenter-points of the drying-apparatus, to be retained thus till dried and received by the folding apparatus.

Claim.—The adjustable, obliquely situated tenter-wheels G G, provided with laterally playing tenter-points *j j*, in combination with the oscillating guides *i i*, arranged and operating in such manner as to seize the cloth and stretch it uniformly, at the same time bringing its edges perfectly even and straight; in which condition it is delivered to the tenter-points of the drying-apparatus, to be retained thus till dried and received by the folding apparatus, as set forth.

No. 11,142.—Adrian R. Terry.—*Mode of Protecting Gas Retorts of Iron.*—Patented June 20, 1854.

The protection is effected by covering the retort externally with wire gauze, and filling the meshes of the latter with repeated layers of mortar, prepared of 30 parts of blue clay, 66 parts of silicious sand, 4 parts of borax, or other flux, and water. This coating, when dry, is brushed over three or four times with a glazing prepared of 10 parts of clay, 10 to 15 parts of potash or soda, 50 parts silicious sand, 30 parts litharge, and as much water as to give the mixture the consistency of cream. The latter glazing is to be applied to the inner surface of the retort also.

Claim.—The application to gas-retorts of a coating which consists of a series of layers, or laminæ, of luting and metallic wrapping, substantially as specified.

No. 11,143.—CHARLES E. WETHERED, JOHN WETHERED, and SAMUEL WETHERED.—*Application of Ordinary and Superheated Steam for Heating Purposes.*—Patented June 20, 1854.

In this invention, steam is made to leave the boiler by two different tubes, one of which passes through the fire-chamber to superheat the steam, which is then combined with ordinary steam in the other tube, and the mixture is employed to perform the various services, as set forth.

Claim.—The application of the combination of ordinary steam and superheated steam; which combination is effected by bringing them together in pipes of any convenient form, before or at the point where their contents are discharged, for the purpose of boiling, evaporating, drying, melting, and heating.

No. 11,144.—JOSEPH R. WINCHESTER.—*Carriage Tops.*—Patented June 20, 1854.

This invention consists in the combination and arrangement of the horizontal cross-brace *a a* attached to the outside braces *b b* at *c c*, with the outside pointed braces, as shown in the drawing; which combination enables a person riding in a carriage to raise or let fall the top without inconvenience, and without getting out of the carriage, by means of the horizontal brace *a a* above mentioned.

No. 11,145.—WILLIAM C. WRIGHT.—*Improvement in Machines for Folding and Measuring Cloth.*—Patented June 20, 1854.

The essential features of this machine consist of a moving table formed of a segment of a cylinder, and having a reciprocating rotary motion imparted to it, the length of which motion may be adjusted for different lengths of folds, said table operating with a pair of guiding folders working alternately to form successive folds of the cloth, and a pair of adjustable holders at each end of the traversing table to hold the folds as they are made; these holders being so arranged as to be lifted up at the time the end of each fold is approached, and shutting down upon the same as soon as the table begins to reverse its motion.

Claim.—Making the folding table *g g* of the machine move with a reciprocating motion, so as to make the folds and determine their length.

Also, making said motion adjustable, in order to change the length of the folds to be made and measured.

Also, the combination of the moving folding-table *g g* with the guiding folds *t t*, and the elongated holders *u u* at each side of the table, for folding, holding, and guiding the cloth.

Also, making said holders adjustable upon the ends of the folding-table, so as to accommodate different lengths of folds.

Also, relieving the cloth, when folded, from the folders and holders, so that it may be removed from the folding-table, by raising all of them simultaneously by means of the treadle connected to the said folders and holders, through the mechanism described, or any substantially similar.

No. 11,146.—S. V. Collins, assignor to W. O. Hickok.—*Mode of Setting and Holding Pens for Paper-Ruling.*—Patented June 20, 1854.

The object of this invention is to rule paper with several different colors, all at the same time. It consists in attaching one or more extension-pens N to the rests K L, in common use, by an additional adjusting-beam O, by means of which the different colors used are kept from mingling.

No. 11,147.—Luther Hill, assignor to Luther Hill and Lorenzo Stratton.—*Improved Machine for Stamping out Soles of Boots and Shoes.*—Patented June 20, 1854.

Claim.—The improvement of combining with the under side of the follower and with the cutter, as described in specification, a sole-bender or former M, or projection in relief of the form necessary to bend the sole into the shape it is to have when fixed on a boot or shoe; the said sole-former, by bending the leather, causes its edges to stand perpendicularly to the plane of the outer edge of the upper surface of the concave side of the sole, as specified.

No. 11,148.—Levi W. Mallory, assignor to William Morris.—*Improvement in Omnibus Registers.*—Patented June 20, 1854.

Claim.—The combination of the rod M, guide Q, lever N, spring U, coupling O, and eccentric ratchet or trigger P, operating substantially as set forth, to prevent the ringing of the bell until the fare is registered.

The parts M N O P Q and U compose what the inventor calls a trigger or catch, which prevents the possibility of ringing the bell without registering the fare; thus it will be seen, when the hammer has been drawn up, the rod M working through the slide Q is also forced up by the spring U working under the lever N, to which is attached the coupling C connecting said lever and the trigger P; thus, if the driver pulls the handle of the register, the trigger P flies up around a screw in its lower extremity, so as to bring its notches under a rod J, and prevent it (J) from coming back until the fare has been registered and the bell struck.

No. 11,149.—Stephen White, assignor to Henry C. Jones.—*Padlock.* Patented June 20, 1854.

This improvement consists in making the sliding bolt *h* with a shoulder *m* in combination and acting with the turning bolt *c*, both entering the mortise of the shackle in opposite directions.

Claim.—Making the sliding-bolt with a shoulder, or its equivalent, acting substantially as specified, in combination with the turning bolt, both entering the mortise of the shackle in opposite directions, etc.

No. 11,150.—JONATHAN AMORY and WILLIAM P. PARROTT.—*Improvements in Steam-Boiler Furnaces.*—Patented June 20, 1854.

The improvements herein secured are applied to "Baker's steam-boiler furnaces;" and for further economizing the heat and promoting combustion, such gases as are no longer serviceable for this purpose are drawn into the stack and allowed to escape by a pipe included within another, the latter being used for the purpose of introducing fresh air into the fire-box, which, while in its passage, becomes heated by the noxious gases passing out.

Claims.—1. Conducting of the carbonic acid gas, or other heavy and incombustible gases which check combustion, by means of a pipe which communicates with the bottom of the furnace, at or near one end of the same, and with the smoke-pipe or flue, as above described.

2. Including a portion of the air-pipe *h h* within a larger pipe or jacket *i i*, through which the heated or incombustible gases pass in their exit from the furnace, substantially as described and for the purposes specified.

No. 11,151.—JESSE BANMAN.—*Improved Cider Mill and Press.*—Patented June 20, 1854.

This improved arrangement of devices for carrying on the various parts of the process for making cider, is clearly set forth in the claim and accompanying illustration.

Figure 1 is a perspective view of the mill, part of the top-cover E being broken off.

Figure 2 is a section through the pressing box H.

Figure 3 is a side view of the secondary mill.

Claims.—1. Use of the wheel C, provided with off-sets or planes *a b*, and teeth or spokes, as described, in combination with the spring D D for grinding the fruit.

2. The arrangement of the grinding-wheel C, springs D D, with the cam E, pressing-box H, and pomace drawer N, with spring O, for the purpose of pressing the pulp and delivering the pomace, substantially as set forth.

3. In the secondary mill the arrangement of the spring R, concave Q, and cam-shaped rasping-wheel or grinder P, for the purpose of reducing the fruit to a pulp.

No. 11,152.—CHARLES H. BEATTY.—*Improvement in Coffee and Spice Mills.*—Patented June 27, 1854.

The grinding-nut is adjusted for coarse or fine grinding by the tempering screw C, which, in being turned by hand, is brought to bear upon the additional piece or lever affixed to the handle.

Claim.—Adjusting the movable grinder of coffee or spice mills by a handle or lever composed of two parallel pieces and a tempering screw, substantially as set forth.

No. 11,153.—S. Oscar Cross.—*Improved Grape Frame.*—Patented June 27, 1854.

This invention consists in bringing the frame near the ground, to render it capable of being raised to air or sun the vines, and of being depressed to protect the vines from cold, or to facilitate the picking of the grapes. The applicant proposes also, by a late crop of oats grown among the prostrated vines, to protect the latter during winter.

Claim.—An adjustable elevating and depressing grape-frame, with or without supporters attached, made of any known material, for the better cultivation of the grape, which it is believed will secure all the advantages hereinbefore specified.

No. 11,154.—Thomas H. Dodge.—*Improvement in Regulators for Equalizing the Flow of Gases and Fluids.*—Patented June 27, 1854.

This improvement consists in the construction of the regulator, as shown in the drawings. A and B are two chambers communicating at the base by the opening *a*, and at the top by the opening *b*, chamber D, and opening *c*, the latter controlled by valve C, acted upon by float E. A^1 is the supply-pipe of the gas or fluid to be regulated in its flow, B^1 the discharge-pipe for the same; thus the gas or fluid is supplied to consumption by the way indicated. A certain amount of supply and consumption given of either gas or fluid, water or any heavier liquid is introduced through pipe F into chamber A, until, by the communination in *a*, it ascends to such a height in B as to determine an opening in *c*, answering said given proportion of supply and consumption. If the opening is consecutively required smaller, fluid is added at F^1; if wider, fluid is drawn off at G. For smaller disturbances, arising either from accidental changes in the supply or in the consumption, the tendency of the water or any other heavier fluid at the bottom of the chambers A B to come to a level, will so affect the opening *c*, that whatever those disturbances be, the flow of the gas or fluid will not be affected thereby at the point or points of consumption.

Claim.—The employment for regulating the flow of gases and fluids of two chambers, furnished and arranged, and operating, as described.

No. 11,155.—George Esterly.—*Improvement in Mowing Machines.*—Patented June 27, 1854.

The invention is confined to two devices, viz: the cutter-bar A A and the track-clearer or plough J. The cutter-bar is formed of detached pieces, every other of which has on its rear rectangular projections, which serve both the purpose of supporting the cutter-bar upon the platform bar L while set in operation, and of cutting away gummy matter and clearing the blade. The under side of the bevel of the cutting edges is also ground away (figure 3) for aiding in the latter effect.

The plough J is designed to turn the previously-cut grass to one side out of the way of the shoe C which follows it.

Claims.—1st. The construction of the sickle in such manner as to

have projections on alternate sections of the sickle sliding upon bar L, operating as and for the purposes set forth.

2d. Grinding off the raised feather-edge made by the chisel in cutting the sickle, as set forth.

3d. Attachment of plough J to the sickle-beam by a screw pivot, to fit said plough to the surface of the ground.

No. 11,156.—Joel A. H. Ellis and Alexander Gordon.—*Improvement in Reversible Capstans.*—Patented June 27, 1854.

The nature of this invention consists in combining with the capstan 49 a shifting spur-wheel 53, connected to the shaft of the capstan by feathers, and operated by a lever 54, or its equivalent, for the purpose of reversing the direction of the revolving of the barrel of the capstan, without reversing the direction of the sweeps to which the power is applied, and without stopping its operation, and giving the barrel of the capstan an increased backward motion over that of its forward motion.

Claim.—The shifting spur-wheel 53, connected to the shaft of the capstan by feathers, and operated by a lever 54, or its equivalent, for the purpose of reversing the direction of the barrel and the capstan without reversing the direction of the sweeps, and giving said capstan and increased backward motion, substantially as described in specification.

No. 11,157.—J. Durell Greene.—*Breech-Loading Gun.*—Patented June 27, 1854.

This invention consists in the introduction of a self-adjusting thimble into the rear end of the barrel, (see *a* and A,) which thimble, being not absolutely secured to the barrel, is kept down upon its seat by the force of the discharge, and may be also driven out against its seat when, from the wear of the parts or other cause, the joint between the barrel and the breech becomes loose, thereby tending to prevent the escape of gas from the joint, and its attendant evil consequences. It also consists in the peculiar manner of locking the barrel to the breech by means of the wedge-formed ears L and the hooks M, in combination with the method of controlling the forward and revolving motion of the barrel by means of the cylinder E, the sleeve F, and the spindle *c*, the whole being connected together by the key K, in the manner set forth.

No. 11,158.—William Hall.—*Door Locks.*—Patented June 27, 1854.

The improvement consists in the slotted slides K, which are allowed to arrange themselves upon the steps of the former M, to form the bits of the key in combination with the pin *l* when the tumblers are operated by turning the key.

No. 11,159.—DANIEL HILL.—*Improvement in Seed Planters.*—Patented June 27, 1854.

Connected with this seeding machine are a harrow and roller. The hopper *k* contains an agitator *a*. The teeth of the rotary harrow are seen at *f f*, and the second roller at *a*, above which is the driver's seat at *b*. In figure 2, S is a reversible directing board, having one side smooth for sowing broadcast, and upon the other cleats *t* for drill-sowing. This board is placed under the hopper to direct the seed in falling.

Claim.—The reversible directing board, plain on one side and furnished with converging slats or ridges on the reverse side, for the purposes of either drill or broadcast sowing.

No. 11,160.—JULIUS HOTCHKISS.—*Improvement in Suspender Ends.*—Patented June 27, 1854.

The nature of this improvement consists in attaching the straps to each end of the buckle by a double connexion, whereby a self-adjusting action is obtained, thus adapting the suspenders to fit easily without regard to the positions of the body of the wearer. See figure, at *c c*.

Claim.—The double attachment or connexion of the straps with the buckles, substantially as above described and set forth.

No. 11,161.—WALTER HUNT.—*Improvements in Sewing Machines.*—Patented June 27, 1854.

The nature of this invention consists in the manner of feeding in the cloth, and regulating the length of the stitch solely by the vibrating motion of the needle.

The patentee disclaims broadly in the sewing machine the feeding of the material to be sewed by the needle.

Claim.—Sustaining both ends of the needle whilst moving the cloth to effect the feed by means of an inclined guide *n*, made adjustable and placed under or upon the shuttle side of the cloth.

Also, the rotary table-top *o*, in combination with the guides or ways underneath the same, arranged and operating as set forth.

No. 11,162.—H. M. JOHNSON.—*Improved Rotary Cultivator.*—Patented June 27, 1854.

This cultivator consists of a series of cutting revolving disks *a a*, followed by other disks *b b* and *c*, all armed with knives *w w*.

The patentee does not claim disks or rotary coulters sharpened at their periphery, nor disks having transverse knives on their periphery.

Claim.—A system of sharpened disks or rotary coulters, a part of which are armed upon their periphery with knives projecting laterally, said knives being set obliquely to the radius of the disk, as above described, the whole being combined and arranged in three several sets, so that the two sets armed with knives shall cut alternate sections of the soil, substantially as set forth.

No. 11,163.—D. W. KENNEDY.—*Improvements in Machinery for Tentering and Drying Cloth.*—Patented June 27, 1854.

In the accompanying drawing, A A are two standards which support in bearings the shaft B B, which carries the open disks C C^1. The shaft B B is hollow, and is connected at one end with a steam or hot-air pipe E, and at the other end with a discharge-pipe F. It is enlarged at that part between the wheels in the form of a drum G. The disks C C^1 are furnished with arms *b b*, and a spiral strip *c c* attached to said arms, and making several revolutions, and a rim *d*: one is made of a form exactly the reverse of the other, in order that when the spiral strips *c c* face each other, they may correspond exactly. The tenter-hooks *e e* are secured in the spiral strips. The disk C is secured to the shaft B; the other, C^1, is movable, so that by turning it on the shaft, the distance between the two series of tenter-hooks may be varied for cloths of different widths. H is a guide-roller.

The patentee disclaims the revolving-reel or heads, having the cloth to be dried wound spirally between the heads, with a continuous air-space between the volutions; and also disclaims, in itself, for drying cloth, the employment of a revolving hot-air or steam drum.

Claim.—The reel constructed as described, in combination with the hot-air or steam drum arranged upon its shaft, whereby the cloth near the shaft may be dried equally with that upon the outer diameter of the reel, and thus equalize the shrinkage of the cloth throughout its whole length.

No. 11,164.—GEORGE W. LA BAW.—*Improved Mitering Machine.*—Patented June 27, 1854.

This invention is designed to facilitate and perfect the finishing of miters; and consists in a tool so constructed that it may be fastened to a bench and almost instantaneously be set to any angle whatever.

Figure 1 is a perspective view of the machine.

Figure 2 is a view of the chisel, together with the spring and nut attached to it.

Claim.—The combination and arrangement in the manner described, or in any manner equivalent thereto, of the several specific parts, or their equivalents, of the machine, without confining himself to any particular arrangement of the parts, for the purpose set forth.

No. 11,165.—ALEXANDER B. LATTA.—*Improved Hydro-Pneumatic Force-Pump.*—Patented June 27, 1854.

The drawing presents a sectional view of this pump, more particularly the internal arrangement.

Claims.—1st. Discharging the air from the cylinder, before the end of the stroke of the piston, by causing the piston to move beyond the end of the cylinder, and into the enlarged chamber.

2d. Inclining the top of the water-chambers upward from the end of the cylinders to the discharge-valve V^1.

3d. The protrusion of the end of the piston from the end of the cylinder, at the end of each stroke, in combination with the upward inclination of the top of the chamber leading to the discharge-valve V^1.

No. 11,166.—JOHN MCF. LYETH.—*Improvement in Coffins.*—Patented June 27, 1854.

This invention relates to the method of constructing coffins of marble slabs, joined by hook-belts *e e e*. The lid is secured by screw-bolts. Handles B B are at the sides *f*, yet connected to the bottom through rods *a a*. The applicant is aware that coffins are made of stone, porcelain, and other materials.

Claim.—The method herein described of constructing marble-slab coffins, so that the joints shall be tight and strongly secured to each other and to the bottom, and, when raised by the handles, the weight shall come upon the bottom slab, substantially as described—the whole forming a new article of commerce not hitherto known or used.

No. 11,167.—WILLIAM MALLERD.—*Improvement in Gas-Burners.*—Patented June 27, 1854.

The ever-varying pressure, arising from several causes, which produces the flaring and flickering in gas-lights, is obviated by this invention. Small perforated diaphragms set at different spaces in the burner, and some of them slightly loaded, give an equable and uniform flow of gas to the burning orifice, retarding the emission under increased pressure, and keeping a small quantity in reserve for a supply under diminished pressure.

Claims.—1st. The perforated cups or partitions, with their edged rings encircling the perforation, in combination with the perforated disk-valve, and the pin-points to support it.

2d. The series of two or more valve-chambers, as described, each succeeding valve having a smaller perforation than the preceding one, and a slight increase of weight; the whole arranged and operating substantially in the manner and for the purpose set forth.

3d. Making the holes in the jet so as to burn at low pressure in combination with a regulator.

No. 11,168.—WILLIAM MALLERD.—*Improvement in Gas-Burners.*—Patented June 27, 1854.

The claims, as set forth, sufficiently indicate the nature of the improvement secured by this patent.

Claims.—1st. Making the tip A, where the jet or jets of gas are burned, of pure tin, or other metals of which tin forms a large proportion, thickly coated with tin, for the purposes set forth.

2d. Making the tube B, and inner portion of burners, of tin, or any other metal thickly coated with tin, to prevent corrosion, and to avoid the use of solder.

3d. Punching the holes through the tips or jets of gas-burners, in-

stead of drilling or sawing, which can be done by a hand-punch, but with more accuracy and despatch by a small machine, for which machine William Mallerd has applied for letters patent in England, in October, 1853, to be taken out in Michael Hollins's name by Newton & Son. The punching of the holes creating a smoother channel, obviates all the difficulties caused by sawing or drilling.

No. 11,169.—JOHN H. MCGOWAN, JR.—*Improved Double-Acting Force-Pump.*—Patented June 27, 1854.

Claim.—The combination of an air chamber communicating with the pump above all the valves, with a vacuum chamber communicating with the pump below all the valves, whereby the elevation of the water is rendered more equable, and effected with a saving of power.

No. 11,170.—JOHN MELENDY.—*Improved Fruit Picker.*—Patented June 27, 1854.

This fruit gatherer consists of a stellated grapple B, upon the end of a pole, which also carries basket C, the latter being capable of sliding downward by means of cord *g*, and of being pushed upwards again by coiled spring F.

The applicant is aware that a pole carrying two tines similar to his has been employed, with a basket suspended below to prevent the apples from falling, and also a basket whose upper edge is surrounded by a series of arms to seize the fruit.

Claim.—The application of the star or serrated cover or separator B and the sliding basket C on the pole, so as to extend entirely around it on the pole, and so that the serrated cover shall be stationary relatively to the pole, and the basket be made to slide or move towards and away from the cover, and be operated substantially as specified; the whole construction and arrangement of the parts rendering the instrument far more convenient and effective in use, and less liable to bruise or injure the fruit gathered by it, than any of the others to which reference has before been made.

No. 11,171.—DANIEL MINTHORN.—*Improvement in Inhaling Tube.*—Patented June 27, 1855.

This apparatus is designed for inhaling medicated vapors. Into bottle *a* the air enters, through tube B, and, ascending through the medicated liquor *c*, passes through the flexible tube D and to the mouth at E.

The applicant does not claim inhaling tubes as such.

Claim.—The bottle or flask, with an air-tight stopper, and a tube with the lower end submerged in said fluid, and the inhaling tube, in combination with the flask and tube, for the above-named purposes.

No. 11,172.—WILLIAM J. MILLER.—*Brad Cutting Machine.*—Patented June 27, 1854.

This improvement and claim consist in the arrangement of the vibrating shear *d*, in relation to the revolving shears or cutters *e* e^1, as connected, so as to change the position of the cutting edge of the vibrating cutter, and cause it always to stand parallel with the edges of each revolving cutter, until the nail has been cut off, substantially in the manner set forth.

No. 11,173.—THOMAS PENROSE.—*Improvement in Road Scrapers.*—Patented June 27, 1854.

This improvement consists in the combination of the tail-piece *d* with its adjustable brace *f*, and this again combined with the flat scraper *a*, having the points of attachment of its draught-chains near its lower edge, as shown in the drawing; by means of which the scraper may be kept inclined at the most effective angle for scraping up and conveying its load, and its tendency to trip and discharge its load prematurely, at the same time prevented.

Claim.—To the tail-piece, with its adjustable brace, when combined with a flat scraper, having the points of attachment of its draught-chains at its lower edge, etc.

No. 11,174.—T. H. PEAVEY.—*Improved Charger for Fire-Arms.*—Patented June 27, 1854.

This invention consists in the combination of a chambered cylinder A, confined between two plates B B^1, with a spring catch F, or its equivalent; by means of which the chambers *a a* may be severally held in communication with holes *f f* and the muzzle-piece D made in and attached to one of these plates, as shown in B^1.

No. 11,175.—OLIVER PIER.—*Trap for Animals.*—Patented June 27, 1854.

This trap is constructed in the same manner with the ordinary steel-traps used in catching beavers, rats, &c., differing only in the form of the jaws, which are one and two pronged, and pointed as represented in the drawing, at *e e*, and *f*.

Claim.—The lever treadle-set or fall, and the elbow catch-latch, in combination with the single and double prong grapple, together with the folded spring, specifically as described and represented by the drawings.

No. 11,176.—L. L. PLATT and A. L. PLATT.—*Improvement in the Manufacture of Wooden Buttons.*—Patented June 27, 1854.

This invention consists in compressing the blanks or circular pieces of wood *a*, so as to render the wood compact and dense, thus causing the button to be more durable and stronger than those hitherto in use.

Claim.—Manufacturing wooden buttons by cutting the blanks from slabs which are of a greater thickness than the buttons are intended to be, and reducing said blanks *a*, by pressure, to the desired thickness *b*, for the purpose of forming durable and well-proportioned buttons, as set forth.

No. 11,177.—HIRAM and S. H. PLUMB.—*Improved Mortising Machine.* Patented June 27, 1854.

This improvement consists in the employment of two chisels for cutting the ends of the mortise, and a reciprocating chisel or planer working horizontally for cutting out the wood between the two end chisels, as the latter are forced gradually into the wood.

Claim.—Cutting mortises by having two chisels G G forced gradually into the wood or stuff, and a reciprocating chisel or planer K working between; the chisels G G cutting the ends of the mortise, and the chisel or planer K cutting out the wood between them; the above parts being arranged and operated as herein shown, or in an equivalent manner.

No. 11,178.—B. D. SANDERS.—*Improvement in Grain Separators.*—Patented June 27, 1854.

This improvement consists in a modification of the arched trunk of winnowers, of the description as patented to the inventor in 1844; said trunk, represented here by A, is divided by partitions *a a*, into three compartments *b c d*, the lower ends of the subdivisions forming an inclined plane, at a little distance under which is placed a screen E; so that the grain introduced into the spout A, by the hopper F, is not winnowed at once and all together, but, rolling down the inclined screen, is taken up by the successive suction of the subdivisions as it reaches them by its specific gravity, thus admitting not only of cleaning but separating the grain into sundry qualities.

The valves *e f g* regulating the blast in the several compartments, and also the strap *h h h*, are disclaimed.

Claim.—The combination of an inclined screen next adjoining the feeding hopper, with the suction spout, subdivided into two or more compartments, the lower ends of the partitions extending downward nearly to the screen, in the manner and for the purposes herein set forth.

No. 11,179.—WILLIAM H. SAUNDERS.—*Improvement in Carriage Axles.* Patented June 27, 1854.

This invention and claim consist in the combination of a taper axle having an enlargement at the root, with a box having a similar inside enlargement at its rear, and a diminution of size outside, with concentric rings or grooves upon it for allowing it to be wedged in the hub, the whole being for the purpose of strengthening the axle without en-

larging the box, and to enable the carriage-maker to use smaller hubs, with a sufficiency of wood therein to preserve the necessary strength, substantially as represented.

No. 11,180.—P. SEAVER.—*Calipers.*—Patented June 27, 1854.

These calipers are operated by a dog B; by means of a nut and screw on shank of B, the cams on the extremities of arms A impinge against this dog, and are moved by it.

The claim covers this combination.

No. 11,181.—ISAAC STRAUB.—*Improvement in Corn and Flour Mills.*—Patented June 27, 1854.

By means of the train-blocks 24, the faces of the mill-stone are rendered parallel, and remain in that state, so as to render any interference on the part of the miller unnecessary.

Claim.—The combination of the permanently adjusted tram-blocks 24 for supporting the upper stone, and the bridge-tree 15, which is adjustable at both its ends, for supporting and adjusting the spindle and the lower stone or runner upon it, to the upper stone, substantially as described.

No. 11,182.—THOMAS SUMNER.—*Steam-Hammer.*—Patented June 27, 1854.

This improvement consists in the arrangement of the hinged guide-frame D, which carries the hammer, in relation to the anvil B, by supporting the said guide-frame on a trunnion below, situated at the back of or on one side of the anvil, and at the same level, or thereabouts, as that occupied by the bar or work under operation on the anvil, the said hinged guide-frame being furnished with a counter-balance weight, to facilitate and steady its swing and relieve the swinging parts from strain when occupying an oblique position.

No. 11,183.—HARTWELL L. TURNER.—*Improved Head-Gate for Water-Wheels.*—Patented June 27, 1854.

The nature of this invention consists in a simple method of operating the head-gates of re-action water-wheels, which prevents leakage and overcomes the difficulties incident to other methods of hoisting and lowering them, and also renders them less liable to get out of order. The improvement is equally adapted to wheels of every size.

The drawing presents a vertical longitudinal section of a flume, pitch, &c., showing the improved head-gate, in which A represents the head-gate attached to the cross-head B by the jointed bar C, that swings freely on the pin *a* which connects the bar C and the eye-bolt D; this latter passes through the cross-head and has a thread on it, upon which is screwed a nut, by means of which nut and screw the gate is adjusted

to clear the fall block E. F is a lever to the front cross-head G, and hinged on its back end to a connecting-rod H, which rod is also jointed to the rod I, which is hinged to the fall block E, the two forming a knee-joint. J is a rod connecting the head-gate to this knee-joint. The lever being depressed, raises the gate as shown in dotted lines.

Claim.—The manner of constructing, arranging, and operating the head-gates of re-action water-wheels.

No. 11,184.—Enoch Thorn.—*Ventilating Sewers.*—Patented June 27, 1854.

This invention consists in providing a common sewer with an aperture in the crown of the arch, in which is placed a self-acting valve B, which will be opened by the force of the confined air when the same is found to exert a certain amount of pressure, before there is danger of injury to the sewer by bursting.

No. 11,185.—Philo Washburn, H. G. O. White, and George A. Copeland.—*Improvement in Coffins.*—Patented June 27, 1854.

In this coffin there is a cushioned apparatus to raise or lower the head, and the cover may be quietly removed and replaced by means of hooks *b* and eyes *d;* the small door B in the lid is bound with metal, with which the doorway is also lined.

Claims.—1st. A movable and adjustable head-frame, round or otherwise, consisting of the following parts, namely: The head-frame G, the bar O, the uprights I I, the head cushion F, the straps S S, and the hooks F F F, as represented in the accompanying drawings.

2d. The method by which the cover is secured to the coffin, namely: The edges E E E E, the hooks *b b*, the eyes *d*, and the thumb-screws or pins J J, as represented in the drawing.

3d. Facing the edges of the lid and its corresponding aperture with metal, all for the purposes and in the manner substantially as herein described.

No. 11,186.—Henry Weed.—*Improved mode of forming Wire-Frames for Bonnets.*—Patented June 27, 1854.

This improvement consists in the arrangement of pins B, which are placed perpendicularly upon a plate or board A, in suitable positions for the design or form required, and around which the wire D is wound and thereby formed.

Claim.—The method described of forming wire-frames for bonnets, namely: by winding the wire round pins or stays, or their equivalents, arranged on a plate or board, thereby securing uniformity and exactness in every particular, as specified.

No. 11,187.—WILLIAM E. WOODBRIDGE, assignor to CHARLES HUMPHREY.—*Improvement in Whistling Tops.*—Patented June 27, 1854.

The figure represents a section of one of these tops, A being the body of the top. A hole B is made at right-angles to its axis in its greatest diameter; this is made to communicate with an opening C in the line of its axis, in which the whistle or a reed is placed. The whistle represented is composed of two metallic plates with central apertures, through which the air is drawn, when the top is spinning, to supply the air thrown out of the passages B, by centrifugal force, producing the desired sound in its passage.

No. 11,188.—WILLIAM F. COLLIER, assignor to W. F. COLLIER and JOSEPH BOYDEN.—*Machine for Feeding Paper to Printing Presses.*—Patented June 27, 1854.

The object in this invention is for feeding paper to printing presses in single sheets, which is accomplished by means of a bellows O, an elastic tube or pipe Q, and a rotary lifter R, which is exhausted by the bellows O. The paper is laid on the inclined table F^1, from which it is taken by the lifter R, having apertures *c c*, against which the paper is drawn by exhausting the lifter when it is turned against the lips T, and carried forward towards the rollers C B, each sheet being kept separate by intermediate contrivances.

Claim.—The specified parts of the machine, as arranged and combined for the purpose set forth in the title.

No. 11,189.—M. D. and L. W. WHIPPLE, assignors to L. W. WHIPPLE and R. B. FITTS.—*Process of Engraving or Printing upon Glass.* Patented June 27, 1854.

The invention consists in causing a metallic cylinder, having the desired figures or letters engraved on it, to roll in contact with the surface of the glass to be engraved; emery, either dry or mixed with water, being kept constantly at the point of contact between the two.

A second claim covers machinery represented, which accomplishes the above purpose by means of a vibrating lever R, to insure an equalized pressure of the roller L and the glass E.

No. 11,190.—F. C. GOFFIN, assignor to A. B. ELY.—*Powder Channel for Doors of Safes and Vaults.*—Patented June 27, 1854.

The use of gunpowder by burglars and bank robbers for exploding the locks of vaults and safes has suggested the application of the device here referred to, the operation of which will be to allow the powder, if inserted into a lock, to find its way down by a funnel-shaped canal to the floor of the apartment, and so defeat the intended object of injuring the lock.

Claim.—The construction of channels, or hollow chambers, in connection with the doors of safes, vaults, &c., the same being open at top

and bottom, and reaching from the lock to the bottom of the door, substantially in the manner and for the purposes set forth.

No. 11,191.—David Brown, assignor to J. F. Clark and D. Brown.—*Machines for Forming Moulds for Castings.*—Patented June 27, 1854.

This improvement consists in the arrangement of the pattern T, and piston-plate G G, surrounding the pattern, within a chamber or piston-box A S, in relation to the half-flask H; whereby we are enabled to protrude sand into the half-flask from the piston-box or chamber and around the pattern, and thus effect a compression of the sand at the parting instead of at the central portion of the mould, as has heretofore been done, for the purpose of producing more perfect castings.

No. 11,192.—Ira Carter.—*Improved Pump.*—Patented June 27, 1854.

Claims.—1st. The mode of attaching the log S to the cylinder *n n n*, and the grooves to contain the packing.

2d. The form and operation of the induction-valves *p p*, being housed in by the lug of the cylinder, enclosing an air-chamber T between them, and closing the port-holes against the water after it passes them, thereby obviating loss of suction.

3d. The form and principle of the core *o o o*, which may be made a stationary part in a pump, or an operative part, by changing the locality of the induction-valves *p p*.

4th. The mode of oscillating by two cranks C C, with friction-wheels B B on their wrists, being brought to act upon a lever D between them, vertically attached to that part of the pump to be operated; and the said cranks being made firm on two parallel horizontal shafts H H, geared to revolve at equal speed.

Figure 1 is an external view of that end of the pump where the cranks are applied to the lever.

Figure 2 is a transverse vertical section.

No. 11,193.—Augustus F. Dalson.—*Apparatus for Dessicating Alimentary Substances.*—Patented June 27, 1854.

This apparatus consists of a circular shallow evaporator A A. The substance treated rests in the circular border depression, and an agitator *t* and roller *r* constantly produce a fresh surface of the liquid during evaporation. To and in the latter, currents of air are constantly drawn or forced over the surface of the liquid, between the evaporator A A and the cover C, and down through the central pipe P. The liquid is heated by steam-jacket B B, or steam-pipes *p*, or otherwise.

Claim.—The combination of the shallow pan A with a rapid current of air underneath the cover C, and thence through the central draught-pipe P, together with the apparatus for continual stirring, by means of the revolving cover C and its fixtures *t r*, substantially as described.

No. 11,194.—JONAS EBERHARDT.—*Mode of Preparing the Extract of Archil.*—Patented June 27, 1854.

The process consists in using calcined magnesia instead of ammonia, putrid urine, and other substances, as a mordant in dyeing with archil. Thirty-two parts of the archil extract are mixed with four and a half parts calcined magnesia, and from thirty-four to seventy parts of gum-water (agreeably to the shade desired;) and the goods dyed in the mixture require no treatment with acids for the fastening of the color.

Claim.—The preparation of the archil in the manner and for the purpose stated. No illustration.

No. 11,195.—HENRY B. JAMES.—*Machine for Scouring and Cleaning Grain.*—Patented June 27, 1854.

This machine consists of a vertical rotary beater and fan. The specific point of invention is the throwing of the grain from side to side of the trunk, while it crosses the air-blast each time, as from P to N, and from N to M, and so on; thus producing the effect of sending the grain through a series of blasts before it arrives at the scouring chamber.

Claim.—The combination of hopper P, air-trunk N, spiral air-passage L, and separator O; said combination being effected by a common air-tight casing, in the manner and for the purposes set forth.

No. 11,196.—ALFRED D. KELLEY.—*Improved Machine for Cutting Heels for Boots and Shoes.*—Patented June 27, 1854.

The main feature of this machine consists of a series of pattern-blocks B, a flexible yoke E, a spring-knife D, and an adjusting-screw C. The spring-knife is caused to conform to the shape of the pattern-block, of any required size, by means of the yoke, which is constructed of common band-iron, or its equivalent, and the screw; the screw being applied in such a manner as to draw the band or yoke with the flexible knife closely around the pattern-block. (See figure.)

Claim.—The combination and arrangement of the flexible yoke and its screws with the spring-blade for the former or pattern, the flexible yoke and screw enabling a person to change the form of the cutting edge of the knife, or to adapt the knife to any pattern-block, substantially as specified.

No. 11,197.—EDWARD LINDNER.—*Magazine, Repeating, and Needle-Gun.*—Patented June 27, 1854.

This invention consists of the rack E, situated between the gun-barrel A and the cartridge-barrel B, and the construction of the piston W, in combination with said rack, for the purpose of pressing the cartridges into the revolving breech-piece as the gun is cocked and discharged.

2d. In the arrangement of the spiral spring around the needle, to-

gether with the toggle-joint *b*, at the upper end of the hammer L, constructed as set forth, and acting upon the needle in such a manner that after said toggle-joint has pressed the needle sufficiently far to ignite the cartridge, said toggle-joint is forced upwards, allowing the needle to be forced suddenly back by the spring under the toggle-joint, by which quick returning motion any heating of the needle is prevented.

Claim.—1st. The application of the rack E, situated between the gun-barrel A and the cartridge-barrel B, and the construction of the piston W, in connexion with the said rack, for the purpose of pressing the cartridges into the revolving breech-piece. 2d. The spiral spring round the needle, together with the toggle-joint at the upper end of the hammer L, constructed as set forth, and acting upon the needle in such a manner that, after said toggle-joint has pressed the needle sufficiently far into the cartridge to unite the priming, said toggle-joint is forced upwards, allowing thereby the needle to spring suddenly back and pass under the toggle-joint, by the action of the above-mentioned spring, and by which quick returning motion any heating of the needle is prevented. 3d. Disclaimed is the revolving breech-piece with spiral grooves on the outside circumference; but claimed is the arrangement and manner of working the pin, by which the revolving breech-piece is made to turn substantially as described. 4th. Covering the bottom of the cartridge with a thin skin, to facilitate the piercing process of the same. 5th. The ramming-hammer, worked in the manner and for the purpose herein set forth.

No. 11,198.—ABNER N. NEWTON.—*Improvement in Breech-Loading Gun.*—Patented June 29, 1854.

This invention consists in the mode of operating the sliding breech-pin D, by means of the bar *e e*, the thumb-lever F, and the spring *f*, all applied to the arbor E, which forms the tumbler-shaft, as shown.

Also, in locking and unlocking the sliding breech-pin, by means of a locking piece *k k*, which slides in grooves in the stock of the gun, and a lever H, having a stud *o*, working freely in a slot of suitable form, in a plate G, attached to the same arbor as the levers by which the breech-pin is operated, as shown.

Also, in fitting the cock and tumbler, or other equivalents, (usually secured to the tumbler-shaft E,) loosely to the said shaft, within the stock, and causing the cock to be driven back, to cock the piece by means of a pin *s*, attached to the lever E E, by which the sliding-breech is moved back and forth; whereby the sliding-breech is allowed to return after the cartridge is introduced, and leave the piece cocked, as shown.

No. 11,199.—JAMES NOBLE.—*Improvement in Preparing Cotton and other Fibres.*—Patented June 27, 1854.

This invention consists in combining two rotating rings of teeth, one ring revolving within the other, but eccentric thereto, so that, at one point of the revolutions of the two rings, they come nearly or quite in

contact. In the drawing, *a b* are two rings of comb, revolving upon the fixed bed *c*. The ring *a* revolves within the ring *b*, but is eccentric thereto; so that at one point upon the rings *a b*, they approach towards and then recede from each other. The lower bars *h h* have brushes *m m* projecting from them, by means of which the fibres are raised out of the teeth of the ring *a*, and are carried forward into a position over the teeth of the two rings *a b*, just previous to their coming in contact.

Claim.—In combination with brushes and draw-rollers, or their equivalents, the combining of two rotating rings of teeth, so that not only shall one rotate in and be eccentric to the other, but so that, at or near one point of the revolution of the two rings, they shall come nearly or quite together; such rings, by their co-operation, being made to separate the long from the short fibres.

No. 11,200.—THOMAS PEARSALL.—*Ventilated Flour Barrels.*—Patented June 27, 1854.

This method of preserving flour in casks against souring, consists merely in securing a tube through the centre of the barrel, open at both ends, to admit the free passage of air through said tube.

No. 11,201.—JACOB REVERCOMB.—*Improvement in Ploughs.*—Patented June 12, 1854.

This invention consists in fastening the reversible point *b*, by means of a common key or wedge entering the slot *c* in the land-side.

Claim.—The mode of fastening the points; the same consisting in the insertion of the key through an opening in the land-side, substantially as set forth, in combination with a slot so placed in the stem of such points that, in the different or reversed position of the points, the slot shall be in place for the reception of the key.

No. 11,202 —PHILOS B. TYLER.—*Improvement in Cordage Machinery.* Patented June 27, 1854.

The nature of this invention consists in connecting with the bobbin a variable friction, which shall keep up an exact balance of resistance, without regard to the unevenness of the yarn or the quantity on the bobbin.

In the accompanying drawing, *a* is the frame, *b* the flyers, *c* the bobbins. Between the front-head of the flyer and the bobbin there is a disk of metal *d*, which is connected with the bobbin, and turns loosely on the spindle of the flyer, as the bobbin does. There is an oblong hole *l* in the bobbin, into which, when it is in place, the spring *m* on the face of the disk *d* enters, and causes it to turn with it, the spring acting as a catch to revolve the bobbin. Upon the outer perimeter of this disk a friction-brake e^1 bears, which is attached to the flyer, and carries the bobbin around with it when not unwinding. Upon this brake the inner end of a short lever *e* bears. This lever passes through the head of the

flyer, in which it has its fulcrum, and projects upon the opposite side, where a spring *f* presses it outward, making its inner end bear the brake down upon the disk, causing the bobbin to turn with the flyer, and preventing its unwinding with a force equal to the strain required upon the strand.

Claim.—The regulator, as described, wherein the tension of the strand so acts upon a friction-brake, as to make a uniform resistance, and consequently a uniform tension of the strand or thread.

No. 11,203.—ABRAHAM GESNER, assignor to the ASPHALT MINING AND KEROCENE GAS COMPANY.—A. KEROCENE.—Patented June 27, 1854.

Petroleum, maltha, asphaltum, bitumen, and bituminous rocks, when subjected to dry distillation, at a heat not exceeding 800° Fahrenheit, yield a fluid which, when settled, divides into three distinct strata. The uppermost of the latter is drawn off and redistilled at the lowest possible temperature. From the product of this second distillation, when settled, the supernatant liquid is again drawn off and mixed with five to ten per cent. of sulphuric, nitric, or muriatic acid, (according to the quantity of tar present,) and from one to three per cent. of peroxide of manganese (according to the turbidness of the liquids.) The impurities being thus precipitated, the clear supernatant liquid is again drawn off, and, after an addition of about two per cent. by weight of freshly calcined lime, distilled once more.

At a heat raised to 160° Fahrenheit, a fluid is obtained which, as alleged, has a specific gravity of 0.750, boils at 150° Fahrenheit, is no solvent of gums, and when mixed, at 60° Fahrenheit, in the proportion of 35 parts to 65 parts with alcohol of 844 specific gravity, is highly inflammable and burns in jets like gas. This the inventor calls *A. Kerocene.*

The temperature being raised to 260° Fahrenheit, the fluid obtained is alleged to be of 0.775 specific gravity, to boil at 250° Fahrenheit, to soften gums slightly, and, when dissolved in the proportion of 25 parts with 75 parts of alcohol, under the above conditions, to be moderately inflammable, and to yield an inferior light. This fluid the inventor denominates *B. Kerocene.*

Finally, the distillation being carried on up to a heat raised to 360° Fahrenheit, a liquid is alleged to be obtained of 0.800 specific gravity, boiling at 350° Fahrenheit, being a good solvent of gums, and itself insoluble in alcohol, and not inflammable, burning, however, in an Argand lamp with a button over the wick. This fluid is denominated *C. Kerocene.*

Claim.—The new product or composition of hydro-carbon, for illuminating and other purposes, called *A. Kerocene.* No illustration.

No. 11,204.—ABRAHAM GESNER, assignor to the ASPHALT MINING AND KEROCENE GAS CO.—*C. Kerocene.*—Patented June 27, 1854.

Claim.—The above described composition, denominated *C. Kerocene.* No illustration.

No. 11,205.—ABRAHAM GESNER, assignor to the ASPHALT MINING AND KEROCENE GAS Co.—*B. Kerocene.*—Patented June 27, 1854.

Claim.—The above described composition, called *B. Kerocene.* No illustration.

No. 11,206.—GALUSHA JONAS BUNDY.—*Improved Machine for Digging Potatoes.*—Patented July 4, 1854.

The improvement and claim consists in the construction of the mould-board D of a potato-plough, with slots or passages *b b* standing vertically, or nearly so, and having their respective planes parallel to a vertical plane passing through the draught-beam of the machine, substantially as stated.

The object of the improvement is to allow the dirt to pass through the passages *b b*, and to retain the potatoes by the vertical bars *a a*, to be thrown free from dirt on both sides of the furrow opened by the progress of the plough.

No. 11,207.—HENRY G. BULKLEY.—*Improvement in Evaporating Pans.* Patented July 4, 1854.

The rectangular pan is divided into three chambers, F G H, by the partitions E E^1. The brine, or other liquid to be evaporated, is caused to pass by overflowing from F to G, and from G to H, thus admitting the deposition of all foreign matter in F G, and reserving the chamber H solely for the purpose of crystallization. The flues C C, heating the liquid, are disposed somewhat elevated from the bottom, and near the surface of the brine, to expose the weakest portion of the latter to the greatest heat, and thus to prevent the salt from settling upon them; also, to admit the construction of the bottom of the pan of wood.

Claim.—The employment of a series of pans, F G H, arranged in communication with each other, and heated by a flue passing through them in succession, substantially as herein described, so as to heat the brine, or other solution, and cause the deposite of the impurities, previously to its entering the pan in which the crystallization takes place.

No. 11,208.—AURY G. COES.—*Screw-Wrench.*—Patented July 4, 1854.

This improvement and claim consist in the arrangement of the elevating screw E, of the tube G, on the external surface of the tube, and so as to extend below the milled head H and the screw I, in combination with the arrangement of the screw F within a socket-tube P, on the handle, substantially as specified.

No. 11,209.—THOMAS COX.—*Improved Machine for Bending Felloes.*—Patented July 4, 1854.

The nature of this invention consists: 1st, in the combination of the vibrating felloe-mould B with the flanged bending-wheel M.

2d. In the manner of perfectly bending the last end of each felloe, and securing it upon the mould when completely bent, namely, by the combined action of the bending-wheel M and the wedge-clamp G.

Figure 1 is a side-elevation of the machine, showing its position when a felloe is about half bent. Figure 2 is a horizontal section of the machine, with the felloe about half bent.

Claim.—The combination of the vibrating felloe-mould B with the flanged bending-wheel M, and the manner of perfectly bending the last end of each felloe, and securing it upon the mould when completely bent, by the combined action of the bending-wheel M and the wedge-clamp G, constructed and operating substantially as herein set forth.

No. 11,210.—A. S. T. Copeland.—*Improved Mechanism for Operating Saw-Mill Carriages.*—Patented July 4, 1854.

The drawing shows the machinery in perspective. On one end of the centrifugal spindle I, stands cam M; to this cam is connected an upright handle X, which is furnished with two pins *i*, on its reversed side; said handle works through catch 2, up and down, as occasion may require. On the other end of centrifugal spindle I stands spring-cam H and cam K; a pin in this cam works in the slide of cam G, and to this cam is connected a triangular shaft J, which is furnished with a pinion 5. Immediately under this pinion are two right and left double-threaded endless screws E and E^1; and in the right or left of these screws said pinion works according as it is required to move log-carriage L forward or backward. Thus, by setting the upper pin 1, of upright handle X, below catch 2, triangular shaft pinion 5 is thrown into the left screw, and three distinct reverse motions are made.

A pin *i*, on log-carriage L, coming in contact with latch Y, sets upright handle X off from catch 2; whereupon spring-cam H reverses cams M, K, and G, and triangular shaft J, to their rectilinear position, making six reverse motions. By raising upright handles X until the lower pin *i* is above catch 2, the triangular shaft pinion 5 is thrown into the right screw; then the second pin on the log-carriage L coming in contact with the latch Y, the spring-cam H sets the triangular shaft J in its rectilinear position, making twelve reverse motions.

Claim.—The combination of the triangular working-shaft T, the mechanism for shifting it into and out of gear, with the right and left handed endless screws E and E^1, in any manner substantially the same as described, and for the purpose set forth.

No. 11,211.—Archibald H. Crozier.—*Improved Machine for Creasing and Bevelling Barrels.*—Patented July 4, 1854.

Figure 1 is a front elevation.

Figure 2, a section.

Figure 3, a plan of the cutters, and the mechanism by which they are operated.

Claim.—The movable platform B, and movable cutters *l m*, arranged

in such manner that the cutters may be moved from the barrel, and freed from the crease, when the platform and barrel descend, and moved towards the barrel when the platform and barrel are raised.

No. 11,212.—THOMAS W. CURRIER.—*Improvement in the method of constructing Sofas, Settees, Cradles, and Cribs, or Crib-Beadsteads.*—Patented July 4, 1854.

The nature of this invention consists in applying pairs of half-circles d d^1, each pair being united by a rocker e e^1, or otherwise, to the legs or supports of a settee, for instance, constructed in the usual manner, and the two pairs of circles being connected by a bar f, so that by turning or rolling the structure upon the half-circles, the settee may be raised upon rockers and used as a cradle, or to a still higher elevation and used as a crib-beadstead, as may be desired.

The patentee does not claim in general the attachment of movable rockers to chairs or sofas, as that is not new.

Claim.—The combined arrangement of the cam-wheels and the rockers carried by the cam-wheels, whereby by rotating the cam-wheels the chair or sofa can be raised or lowered at pleasure, and also the rockers brought into play when desired.

No. 11,213.—JAMES A. CUTTING.—*Improvement in the preparation of Collodion for Photographic Pictures.*—Patented July 4, 1854.

To twelve ounces of collodion, in a pint bottle, add one drachm of the iodide of potassium dissolved in alcohol. When thoroughly mixed, add eighteen grains of refined gum camphor.

This collodion is suitable only for positive pictures on glass; it does not receive sufficiently opaque impressions for negative photographs.

Claim.—The use of camphor in combination with iodized collodion.

No illustration.

No. 11,214.—DEXTER DENNIS.—*Improvements in Pressing or Finishing Palm-leaf Hats.*—Patented July 4, 1854. Ante-dated January 4, 1854.

Claim.—The mode of stiffening and finishing hats by covering the outer surface of the hat-holder A with the stiffening composition, and applying the hat thereon, and subjecting it to the action of the heating flats.

Also, the combination of the round-corner flat M, with the crown and side flats L H I K, so as to operate in connexion with them.

Also, the improvement of using a hat-holder, elliptical or oval, in its horizontal section, in combination with applying to the side-flat K a spring-bar N, or contrivance that will allow it to spring or move while the hat-holder is revolved, and adapt itself to such hat-holder, as described.

Also, in combination with the crown-flat, and the elevating and depressing machinery thereof, a fan apparatus to regulate its downward descent on the hat.

Also, in combination with the frame C and the crown-flat, the toggles T, and levers R V W, and the projection S, the springs and connecting cords; the whole being to enable the frame C and the top or crown flat to be operated.

No. 11,215.—C. H. EISENBRANDT.—*Improved Valve for Wind Musical Instruments.*—Patented July 4, 1854.

The *claim* is for arranging the rotating valve *a a* on a pivot-axis *b b*, the extremities of which are pointed or arranged so as to work in the end of an adjusting-screw *d*, passing through an elbow-support *x* attached to the cap *e* of the air-chamber *f*, and the end *b* working in a tightening-screw rest *h*; the said valve-axis *h* attached to a rotating double-jointed lever device *i j k*, combined with the finger-plate *m*, &c., &c.; by which combination a perfect trill or shake can be produced and modulated so as readily to afford the crescendo and decrescendo effects, not hitherto accomplished in the valves of brass wind musical instruments.

No. 11,216.—WILLIAM FINKLE.—*Improvement in Dressing Mill-Stones.*—Patented July 4, 1854.

By this invention the feeding in the grain at the eye, and the ventilation of the stones, are accomplished more easily than heretofore. The peculiar dress of the stone concentrates the grinding near the centre, whilst it secures a brisk and regular discharge of the flour at the skirt.

Claim.—The skirt furrow, isolated both from the leading and from the intermediate furrow or furrows for the object before stated, but parallel to the succeeding leader, in order to facilitate the delivery of the meal as it is ground, either in connexion or otherwise with the flared and deepened entrances of the leading furrows, as described.

No. 11,217.—ROBERT B. FORBES.—*Improvement in the Application of Lightning Conductors to Ships or other Navigable Vessels.*—Patented July 4, 1854.

The nature of this invention consists in constructing and applying a system of socket-tubes to some convenient point on the head of the lower mast, and from thence branching off to the two after-shrouds, or any other of the shrouds, and over and against the outside of the hull to the copper sheathing, or down to such depth on the hull that the lower end of the conductor shall always remain immersed in the water under the ordinary rolling or pitching of the vessel when at sea.

The applicant disclaims any idea of attempting to improve on the "Harris conductor," as fitted to pass through the hold of the vessel, but affirms that his plan of constructing a conductor applied to the mast and shroud and led over the side of the vessel, instead of down

through the hold, and attached to the copper, or extended down towards the keel, as stated, has advantages which are not possessed by said Harris's plan, which cannot be attached to the shrouds; the applicant's plan being particularly applicable to the merchant service, where he believes it will be the means of saving lives and much property.

The applicant disclaims also the system of permanent conductors, as applied to the mast of a vessel in the manner well known as that of Sir William Snow Harris, wherein the conductor is carried down the mast and through the hold and keel of the vessel. Nor does he claim either the common chain or rod conductor, or the mode or modes of applying the same. Neither does he claim making the conductor of fixed lines of metal extending down the mast to near the lower mast-head, and from thence down the after snifters to the ship's side. Neither does he claim making that part of the conductor extending down on the after snifter or shroud, as one long tube of metal.

Claim.—Composing the conductor of a system of socket-tubes and slide-tubes, and confining the same to one of the shrouds of the rigging and over against the outside of the hull, and either to the copper sheathing thereon, or down to such a depth on the hull that the lower end of the conductor shall always remain immersed in the water under the ordinary rolling or pitching of the vessel while at sea; all substantially as specified.

No. 11,218.—J. Frey and D. B. Burnham.—*Sub-Marine Battery.*—Patented July 4, 1854.

This arrangement, as it is claimed, consists in introducing port-hole cases of cast iron, built in firmly with the sides of the boat, and with water-tight gates before and behind the gun, which rests in each one of these cases. The gun has a peculiar projectile with conical head and flange outside of the bore, which being packed close down upon the muzzle, shuts out the water from the interior of the gun while the outer gates are open. The gun is fired by means of the touch-rod Y when it comes in contact with the object, its rear end disengages a spring A^1, which acts upon a touch-rod B^1, which again acts upon a rod C^1, which acts upon the percussion priming D^1 and explodes the gun. (See figures.)

Claim.—The arrangement of guns in the hull of a boat under water with port-holes and gates, in such a manner that the guns may be loaded and fired at pleasure.

No. 11,219.—Heman Gardiner.—*Improvement in Quartz and Ore Crushers.*—Patented July 4, 1854.

Claims.—1st. Suspending the basin E at the centre by a fixed shaft D above a bed A, in the manner substantially as described, whereby, while every part of its circumference is in turn depressed by an arm H and roller V, or their equivalents, revolving on the shaft, the lowest part of the basin, where the greatest weight is, always rests upon the bed, and the shaft is relieved of the greater portion of the weight of the basin and its contents.

2d. The supplemental ball I, suspended or attacned in the manner substantially as described from the pulley G, or its equivalent, revolving above the basin, so that it is always in contact with the inclined part of the basin, where the quartz or ore is most thickly distributed.

No. 11,220.—THOMAS GREER.—*Steam-Boiler.*—Patented July 4, 1854.

The inventor claims the arrangement of inclined and horizontal tubes *c* and *d*, as shown in the engraving.

No. 11,221.—JOEL GLEASON.—*Improved Milk Strainer.*—Patented July 4, 1854.

This invention consists in constructing an adjustable milk-strainer, which can be applied to any pail of suitable dimensions by means of catches and a packing attached to the strainer.

Claim.—The combination of the packing L with the hinged catches J and K, the strainer being supported on the pail by means of the packing in combination with the catches, and the packing being fixed to the body of the strainer E by locking the tin on to the packing on the under side of the body of the strainer, as shown at *a*, all operating in the manner and for the purpose substantially as herein described and set forth.

No. 11,222.—JOHN R. HAGUE.—*Machine for Punching Rivet-Holes in Hose.*—Patented July 4, 1854.

The object of this invention is to punch the rivet-holes at uniform distances apart on each side of the strip of leather of which the hose is to be made. The machine is constructed with a gate *m*, having a vertical reciprocating motion, and at each end of the gate *m* is attached a punch *n*. The punches, as the gate descends, come in contact with the strip of leather, which is placed upon a sliding table, and held in place by a pressing-board *c*, said table being caused to move longitudinally upon a frame between guides *i i* by means of cog-wheel and rack *v*. The holes are punched at the same time on both edges of the strip of leather, and immediately opposite each other.

Claim.—The use of the sliding-table and the pressing-board, which holds the leather in place, in combination with the rack work, the lever, and the finger, for the purpose of moving forward the leather on the sliding-table during each stroke of the punching-gate, and in combination with the punching-gate and punches.

No. 11,223.—WILLIAM C. HIBBARD.—*Improvement in Steam-Engines.* Patented July 4, 1854.

Claims.—1. To isochronal eccentric I.

2. To the combination of the isochronal eccentric I with a governor or regulator, in such a manner that the governor shall control the amount of its eccentricity, and thus regulate the velocity of the engine.

No. 11,224.—Enoch Hidden.—*Improvement in Reading and Writing Stands.*—Patented July 4, 1854.

This invention consists in the peculiar combination of brackets and screws for the purpose of adjusting the position of the desk either horizontally or vertically, as may be required; and the application of sliding-clasps for securing books and papers; and the mode of adjusting the lamp-bracket to the various angles the desk may be placed in.

The patentee does not claim a stand with an adjusting-screw on the top of the pillar, as his invention; nor does he claim a double-jointed bracket; nor does he claim a desk with a box-part attached, for containing writing materials, &c., with a hinged top, and means of retaining such at any angle; nor does he claim the attaching of a jointed bracket as a lamp or candle holder.

Claims.—1. The combination of the double-jointed bracket D and E, and screw C, for adjusting the position of the desk both horizontally and vertically, as and for the purpose herein set forth.

2. The application of the sliding-clasps, with an India-rubber or other elastic band, for securing books, papers, &c., in the position desired, as herein set forth.

3. The mode, herein described, of fixing the bracket supporting the lamp or candle holder, admitting of adjustment at every angle the desk may be placed in.

No. 11,225.—Fenton Humphrey.—*Improvement in Spike Machines.*—Patented July 4, 1854.

Claims.—1. The manner of pointing, by which a change in the place of labor on the rollers is obtained at every revolution.

2. The arrangement and combination of the levers *f*, H, and J.

No. 11,226.—Samuel Ide.—*Improved Distributor for Seed-Drills.*—Patented July 4, 1854.

The invention is confined to a series of connected chambers *e e*, arranged around the centre of a seed-distributing disk A, so that the seed which falls through the cavity D into said chambers *e e*, and thence through cavity *c*, may be discharged in a continuous stream into the drill, the arm e^1 e^1 between the chambers acting, while the seed-disk is in motion, as stirrers, to keep the passages from clogging.

Claim.—A series of connected chambers, or recesses, around the centre of the rotating cog-wheel A, constructed substantially as described, whereby a uniform and continuous distribution of the seed is effected.

Figure 3 represents the chambers on a larger scale.

No. 11,227.—JOSHUA K. INGALLS.—*Improvement in Vault-Cover Fastenings.*—Patented July 4, 1854.

Claim.—The additional lip or nose 2, with the recess 5, for the eye of the cover to fit into, and to hold the catch unlocked, as arranged in relation to the other parts of the catch, as shown.

No. 11,228.—PHILIP H. KECK.—*Improved Wash-Board.*—Patented July 4, 1854.

The nature of this invention consists in constructing, in the bottom of the wash-board, a channel, communicating, at both extremities, with the upper surface of said board; so that the rubber will force the water, at each stroke, through the channel and over the top of the board, for the purpose of wetting the clothes, and otherwise facilitating the washing operation.

Claim.—The construction of the wash-board with the chamber *h* and closely-fitting slide *s*, in combination with the channel *c* and springs *d* and *e*, for furnishing a constant supply of water to the clothes, substantially as herein fully set forth.

No. 11,229.—JOSEPH F. LAIRD.—*Improvement in Ore-Stamping Machines.*—Patented July 4, 1854.

This is an alleged improvement on Ball's patent. The arrangement consists in making the lifters operate on the adjustable weight attached to the stamping-rod; which lifters, when raising said rod, give them a partial rotation by a peculiar contrivance. This is the result of the relative position of the lifter to the periphery of the head on the stamping-rod, so that, without any groove, catch, dog, or other device, it lays hold of the periphery as the stampers are rising, and gives them a rotating movement. The necessity of this motion is, to prevent the unequal wear of the stamper.

Claim.—The arrangement of the lifters, by being so placed as to operate on the periphery of the tappet head, for the purpose of giving the stampers a partial rotation, without requiring other mechanism, in the manner set forth.

No. 11,230.—JOSEPH LEEDS.—*Improvement in Regulating the Draught in Stacks or Kilns for Burning Lime, &c.*—Patented July 4, 1854.

The nature of this invention relates to the covering of stacks or kilns, where great heat is employed, with double domes D, which are made to spread the fire through the body of the stack A A; the under dome having its opening around its outer edge or perimeter, and the upper one at its centre; and also in augmenting the draught, or adding for that which may be taken away by covering the top of the stack, by the use of an auxiliary draught-chimney E. (See figure.)

Claim.—Controlling or regulating the draught of lime, brick, or other kilns, by means of a double dome, in the under one of which the open-

ings are at its outer edge, and in the centre of the upper one, so as to force the draught from the centre to the outside of the kiln.

Also, in combination with kilns controlled by the double-domes, the main auxiliary chimney for increasing the draught in the kiln, substantially as described.

No. 11,231.—WILLIAM H. MUNTZ.—*Improvement in Paddle-Wheels.*—Patented July 4, 1854.

Claim.—Attaching each of the paddles or floats to wheels or rims, wherein that to which the broad surface of each of the paddles is attached is of greater diameter than the other, and the position of the paddles is in, or about in, a line parallel to a radial line, or one drawn through the centre of the wheel-shaft, and the face of the paddle is oblique to the plane of this line, which stands perpendicularly to the axis of the shaft.

No. 11,232.—JOHN A. PITTS.—*Improvements in Horse-Powers.*—Patented July 4, 1854.

The pin *a*, or journal upon which the wheel B turns, is so arranged in the frame as to be slightly loose, so as to have a slight eccentric motion around its fixed point. The box which fits upon this journal also works loosely, the whole being intended to admit of the main-wheel adjusting itself to the spur-wheels E, which must have their journals permanently fixed. By this means, the cogs of the gear-wheels are prevented from binding each other, or cutting or slipping by each other, when under an unusual strain in the work.

Claim.—The box *e*, and set-screws *l j*, in combination with the bridge-piece H, for the purpose of adjusting the spur-gear and bevel-wheels to the main driving-wheel, to prevent binding or cutting, substantially as described.

Figures 1 and 2 represent the piece H, on a larger scale.

No. 11,233.—BENJAMIN LEVERSON.—*Improvement in Cast Iron Car Wheels.*—Patented July 4, 1854.

The nature of this improvement consists in having the disk of the wheel corrugated at or towards the rim, the corrugations being replaced by brackets at the hub.

The patentee does not claim any part of the rim or hub, nor connecting them with a solid web, neither common corrugations nor brackets.

Claim.—A cast-iron web deeply corrugated where it joins the rim, with the corrugations gradually lessening in depth as they approach towards the centre of the wheel, so as wholly to disappear at or near the hub; when it is used for the purpose of uniting a rim and hub, and has its central part strengthened by means of brackets, substantially as set forth.

One half of figure 1 represents the rear-side, and the other half the front side of the wheel.

No. 11,234.—JOHN S. SPEIGHT.—*Improvement in Brick Kilns.*—Patented July 4, 1854.

The object of this invention is to effect the burning of brick with coal in an economical manner. The nature of the invention consists in the arrangement of fire-grates and air-passages, whereby the combustion can be regulated at all parts of the kiln.

Claim.—The long grates C C, with air passages H H, which extend clear through the kiln below them, and have doors D D, to admit the air at either or both ends, in combination with small air-passages *a a* between them, having lateral openings to throw the air under the middle of the fire, for the purpose of regulating the admission of the air to any part of any grate or every grate so as to regulate the combustion, and thereby regulate the heat in all parts of the kiln.

No. 11,235.—M. J. WHEELER, G. W. ROGERS, H. W. PIERCE, and M. B. TIDEY.—*Improved Bevelling Plane.*—Patented July 4, 1854.

Figure 1 is a side elevation.

Figure 2 a transverse section, taken through the body of the plane.

Claim.—Attaching the two bevel-cutters *f f* to two wings B B, which are hinged by a three-flanged hinge *c*, *c*, *c*^{1}, or otherwise so secured to the body of the plane A, as to be capable of swinging a certain distance around a common pivot or axis *l*, for the purpose of being adjusted to set their faces and the edges of their cutters at any angle to each other, and to the face of the fence F.

No. 11,236.—JEROME B. YOUNG.—*Mode of Hanging Bells.*—Patented July 4, 1854.

The method of constructing and operating the bell will be readily understood by reference to the drawing B; the bell is supported on an arm H D, set in a door or any convenient place. To ring the bell, it is necessary to depress the outer end of the lever C C, and its inner end raises the striker E, which gives the required signal.

No. 11,237.—WILLIAM H. POINDEXTER, administrator *de bonis non* of JOHN R. REMINGTON, deceased.—*Improved Cement.*—Patented July 4, 1854.

Melt thirty pounds of rosin; throw into the mass from one half to a pint of ashes of cotton-seed, or any other seed of an oil-yielding vegetable, and as much charcoal dust or bituminous coal dust, or lampblack, or Spanish brown; then stir in dry sand until the mass falls short from the stick, when it is ready for moulding in the usual way. Ground emery added makes the mass fit for grinding purposes.

Claim.—The use of cotton-seed ashes, or the ashes of any other oil-yielding vegetable substance, as an ingredient of a cement, substantially as herein set forth, whether it be mixed with rosin and earthy matters, or with oil and earthy matters.

No illustration.

No. 11,238.—HENRY BURT, assignor to the NEWARK PATENT HOSIERY COMPANY.—*Improvements in Machinery for making Looped or Netted Fabrics.*—Patented July 4, 1854.

The nature of this invention consists:

1st. In a new method of constructing and operating the sinkers, whereby the machinery is simplified.

2d. In so producing the motions of the yarn-carrier, that by arrangement before commencing work, the travel of that is effected to the distance necessary to produce a fabric of any uniform width, as well as to hold the yarn-carrier locked at each extent of throw, during the time required for the accomplishment of the motions of the other parts of the machine.

Claim.—The hollow bar C, or its equivalent, in combination with the extended ends a^1 of the sinkers *a*.

Also, the radius bar *n*, in combination with the cylinder *l* and the collar *h*, for the purposes set forth.

No. 11,239.—THOMAS DRAYTON, assignor to GEORGE W. MCCREADY.—*Method of Purifying Oils.*—Patented July 4, 1854.

The method consists of shaking the oil, (mineral, vegetable, or animal,) with about the fourth of its bulk of alcohol, for about two to five minutes, and then suffering the mixture to settle, when the purified oil settling in the lower stratum may be drawn off for use.

No. 11,240.—WILLIAM BUTTERFIELD, assignor to himself and EDGAR M. STEVENS.—*Improvement in Sewing Machines.*—Patented July 4, 1854.

The object of this machine is to perform the operation of sewing with a hooked needle.

The patentee disclaims the combination of a needle slide and hooked needle, wherein the slide is made to operate so as to close or cover the hook, and prevent it from catching in the fabric whilst it is being drawn through the same; and also disclaims any arrangement of applying the closing slide of a hooked needle to the same side of a needle as is the barb, or hook, so that such slide may slide in a groove in the needle, or carrier thereof, parallel to the motion of the needle.

Claim.—The improvement in the chain-stitch sewing machine, operating with a hooked needle or hook to draw the thread through the material to be sewed, consisting of the "rest cast-off" H, in its combination with the hooked needle A, and as applied to and made to operate

with it and the material to be sewed, and in the loop of thread, as specified.

Also, the improvement by which the rest cast-off H is rendered capable of adapting itself to any ordinary thickness, or variation of thickness, of the fabric to be sewed; consisting in the mode of operating it by the spring F, applied to the carrier-lever E, and made to operate on the lower end of the recess C.

Also, the combination of the bobbin-holder U with the spring V, the friction-disk R, and the axle on which the holder turns; the same enabling an empty bobbin to be removed from the holder, and a full one put in its place, without disturbing the connection of the spring with the bobbin and friction plate or disk.

No. 11,241.—SOLOMON W. RUGGLES.—*Improvement in Cheese Presses.*—Patented July 4, 1854.

Claim.—The general construction and application of the pressing power or mechanism as described in specification, or the arrangement of the pressure bars *c c* and the arms or pitman *e f*, and their application to the remaining stationary and movable parts of the press, as specified.

No. 11,242.—JOHN TAGGART, assignor to JOHN TAGGART and RICHARD PITTS.—*Improvement in Excavating Machine.*—Patented July 4, 1854.

This improvement consists in the combination of the gravitating weight *u* and its line *t* with the windlass barrel *s* and the brake-wheel u^1, so as to operate automatically and rotate both windlass and brake-wheel, and not only take up the slack of the rope *o* while the scoops are being elevated, as described, but at the same time to set the brake-wheel ready for the action of the brake, when it becomes necessary to drop the scoops in order to discharge their load.

Also, in the arrangement of the branch-lines *f g* of the line N^1, so as not only to operate through the ends of the scoop-levers, but also through guiding or sheave-passages of the boom; such an arrangement of the branch-lines producing an increase of draught on the scoop-levers during the operation of closing them, as specified.

Also, in combination with the above described arrangement of the line N^1 through the sheave-openings of the boom K and the two scoop-levers, or about their sheaves, as specified, the union of the branches into one line in combination with the carrying such line through a compensating passage of the boom K, and permitting it to slide freely through the same, in manner as described; the same being for the purpose of enabling the scoops to close together, or upon an object, whenever the movement of one of them during the operation of closing them together is arrested by contact with an obstacle.

Also, the combination of the boom K and the working ropes of it, and its scoops, with a crane, substantially as specified, so that the scoops may be free to be moved, not only vertically, but also in any direction either towards or away from, or laterally with respect to, the crane and

its platform; whereby a lateral movement of the crane may be employed to effect leverage on the scoops in a lateral direction; so as to aid in discharging the article grasped by the scoops, without strain on the boom or the parts through which the boom slides.

No. 11,243.—JOHN B. HARTSON.—*Process of making Car-Wheels.*—Patented July 11, 1854.

Claim.—The converging or centripetal pressure rollers *e e*, arranged and operating as herein set forth, to form a tread or rim on the outer margin of a thin disk of metal, by thickening said margin and moulding it into the required shape, as described, whether the sides of the disk within the rim be supported by clamp rollers or not; and also, whether the disk be heated simultaneously with the compression or not.

No. 11,244.—CHARLES M. GUILD.—*Improvement in Gas Heating Apparatus.*—Patented July 11, 1854.

This invention covers a device for opening and closing the gas supply-cocks, they being actuated by the weight of the article placed upon the shelf in the oven, open when it is introduced, and shut when it is withdrawn. A subsidiary orifice leading to the burner supplies enough gas to keep up a small flame when the oven is out of work, avoiding, by this means, the necessity of relighting the burner.

Claim.—The opening and closing of the valve which admits the gas to the heating apparatus by the act of placing and removing the vessel or thing to be heated, substantially as described.

Also, the small perforation leading from the gas-pipe to the burner or heating apparatus, acting independently of the valve, for the purpose of admitting a jet of gas barely sufficient to keep up the flame without unnecessary consumption of gas when the heater is not in immediate use, or when one article is removed and before another takes its place, substantially as described.

No. 11,245.—ELISHA FRENCH.—*Improvement in Coal Lifters.*—Patented July 11, 1854.

Claim.—A coal screen in a box fitted with a sliding top and ends, and with rockers placed at right-angles to each other on the bottom, constructed and arranged in the manner and for the purpose set forth.

No. 11,246.—M. V. B. DARLING.—*Slide-valve Motion.*—Patented July 11, 1854.

Claims.—1st. Combining the cam and yoke motion for opening the steam port, and the eccentric or cam and yoke motion for closing the steam port, and causing the two motions to act on the valve, by connecting with the valve the yoke-rod *e* of the cam and yoke motion which gives the movement for opening the port, and furnishing the rod *j* of the eccentric or cam-motion which gives the movement for closing the

valve with an eye *k*, or its equivalent, which plays between two stops or tappet-pieces *l l*, properly arranged on the rod *e*.

2d. Giving to the eccentric *h*, or cam which gives the movement to close the valve, a greater throw than the cam which opens the valve; in order that, at the proper time, the valve may be made to close the steam port, and cut off the steam very quickly, or by a very small part of the revolution of the main shaft.

No. 11,247.—C. W. CROZIER.—*Clothes Refiner.*—Patented July 11, 1854.

The receipt for the mixture is the following: 8 oz. of spirits of turpentine, 4 oz. pure alcohol, 2 oz. spirits of camphor, 2 oz. of nitrous or nitric ether, 1 oz. aqua ammonia.

To use the mixture, 1 pound of soap is dissolved in 5 gallons of hot water, and three table-spoonfuls of the mixture added, and the clothes treated with it while hot.

Claim.—The combination of the several ingredients with camphor, to which a peculiar saponaceous and detergent quality is ascribed.

No illustration.

No. 11,248.—JOHN W. BREWER.—*House for Mooring and Managing Balloons.*—Patented July 11, 1854.

This invention consists in building a circular house for the purpose of mooring and managing a balloon in.

Also, in the arrangement of the necessary machinery, steam-engine, gas-retort, &c., for the purpose of sending up and hauling down said balloon.

No. 11,249.—COLLINS B. BROWN.—*Improvement in Machines for Harvesting Grain.*—Patented July 11, 1854.

The nature of the invention consists in the peculiar method of giving the requisite movements to the rake I of a harvesting machine, to deposite the cut grain in bunches for binding, to wit: By means of the main moving lever G, which receives a compound vertical and horizontal movement from the crank-pin *e*, that works in a suitable bearing in the same, about the distance of one fourth its length from its inner end; and the stationary pivot *g* which passes through slot *f*, formed in the portion of said lever that curves upward from the crank-pin *e* towards the inner end of the same, and is secured therein by the nut *i*; the said lever G imparting the required movements to the rake in consequence of its outer end and the outer end of said handle being jointed to the rake-handle H, at a point about one fourth its length from its outer end; and the outer end of said handle being jointed to the horizontally vibrating fulcrum-lever *h*, whose inner end turns in a fixed bearing situated over the axle, and near the inner side of the wheel A.

Claim.—Imparting the required movement to the rake I, by combining with its handle H the horizontally vibrating fulcrum-lever *h* and l

the outer end of the lever G, which has a compound vertical and horizontal movement imparted to it by means of the crank-pin *e*, pivot *g*, nut *i*, and the curved slotted inner portion of said lever G, substantially as herein set forth.

No. 11,250.—C. F. Brown.—*Improved Implement for Blasting Rocks.*—Patented July 11, 1854.

This invention consists in placing the powder or charge within a tube or case A, and between two conical heads C D, attached to a rod B, the head D being confined by the nut E, whereby the force of the powder must be exerted against the sides of the case, thereby more effectually splitting the rock, and without the need of tamping or packing of clay. The said instrument may be used repeatedly.

No. 11,251.—John B. Wickersham.—*Improvement in Foundation for Pavements.*—Patented July 11, 1854.

This invention consists in making the foundation for street pavements of woven or other iron work B upon a bed of gravel, broken stone, or other suitable material A, and then placing suitable paving-blocks C above and upon said iron work.

Claim.—The employment, as a foundation for pavements, of a layer of woven, or interlaced, or other iron work, laid upon a bed of any suitable material, substantially as herein described.

No. 11,252.—John M. Thompson.—*Parallel Motion.*—Patented July 11, 1854.

The improvement and claim consist in producing a parallel motion, by connecting the link B to one end of a radius rod C, whose other end is attached to a crank or arm E on a rock-shaft F placed under the centre of the beam, and receiving motion from the same by gearing, substantially as set forth.

No. 11,253.—J. B. Smith.—*Improved Machine for Mortising Sash Stiles.* Patented July 11, 1854.

Claim.—Such an arrangement of the parts as to constitute a machine capable of mortising both ends of sash stiles of any desired length, and cleaning out the mortises simultaneously with their completion, without the necessity of reversing the ends of the stiles or tightening or slackening the driving-belt.

Also, the combination and arrangement of the vertical power chisels B B^1 and the stationary chisels N N, with the movable bed K and sliding carriage M, or their equivalents, independent of the arrangement of the driving-belt, when used for mortising sash stiles of only one length, and cleaning out the mortises.

The piece D to be worked upon is represented in dotted lines.

No. 11,254.—GUSTAVUS RUNGE.—*Improvement in Trap-Doors.*—Patented July 11, 1854.

The nature of this improvement consists in attaching counterbalances to a folding trap-door, which is kept shut by a latch, after the opening of which the counterbalances will raise the door-folds, and keep them in a firmer perpendicular position, until they are pulled down again by means of a cord, and locked by the latch above mentioned.

No. 11,255.—DAVID RANKIN.—*Method of Applying Water to Cuniform Buckets of Flutter-Wheels.*—Patented July 11, 1854.

The drawing presents a side view of the flutter-wheel and a section of the fore-bay.

The patentee disclaims the wedge-shaped bucket and the eccentric water-way, when used separately.

Claim.—So arranging cuniform buckets upon the radial arms of flutter-wheels that, in passing through an eccentrically formed water-way, three buckets shall receive the volume of water in about the proportions described.

No. 11,256.—ROBERT G. PINE.—*Apparatus for Plating Metals.*—Patented July 11, 1854.

The improvement and claim consist in plating articles by fitting them within a female die J formed of thin sheet metal, or any other proper material, which is placed upon an elastic bed C, the foil K and solder being placed between the female die and article, and forcing a male die H in a heated state upon the article, for the purpose of fusing the solder and causing the foil to adhere and become firmly united to the article.

No. 11,257.—CHARLES F. PACKARD.—*Improved Sawing Machine.*—Patented July 11, 1854.

This machine is designed for sawing laths, pickets, &c., directly from the log; and the improvement consists in the employment of a vertical circular or reciprocating saw, and a series of horizontal circular saws, the latter placed on a single shaft, at a suitable distance apart, the shaft being attached to a vibrating frame operated in a peculiar manner, as described in the specification.

Claim.—The combination of the vertical circular saw D, or a vertical reciprocating saw, and the horizontal circular saws P, when said saws are constructed and arranged, and operated, in the manner and for the purpose set forth in the specification.

The drawing presents a longitudinal vertical section of the frame of the machine, showing the device by which the horizontal saws are operated.

No. 11,258.—WILLIAM MCCORD.—*Improvements in Horse-Power.*—Patented July 11, 1854.

The great driving-wheel B in this invention, being sustained by gear-wheels on its inner periphery, is constructed without arms or spokes. The main wheel is also fitted with friction rollers above and below. The power is transmitted through the intermediate gearing to the driving-shaft.

Claim.—The precise manner herein described and shown of combining and arranging the parts herein specified so as to produce an anti-friction horse-power.

No, 11,259.—ANDREW MAYER.—*Improvement in Gas Stoves.*—Dated July 11, 1854.

The heating power of burning jets of gas is here applied to warming the air of apartments. The construction is such as to make use of all the heat generated, it being given off by radiation from a mass of pumice or asbestos, and all unpleasant odor from the use of gas avoided, the products of combustion being made to escape by the pipe M.

Claim.—The arrangement of the tube D, hot-air chamber H, and disks K K, as herein shown and described, and for the purpose as set forth.

No. 11,260.—HYMEN L. LIPMAN.—*Improvement in Eyelet Machines.*—Patented July 11, 1854.

The nature of this invention relates to the combining with the fastening apparatus of an eyelet machine a self-feeder, which will carry the eyelets from the reservoir underneath the fastener.

The figure shows the feeding apparatus.

Claim.—In combination with a fastener C and a reservoir of eyelets I, the conveying apparatus for carrying the eyelet from one to the other, made and operated substantially in the manner described in specification.

Also, the threading of the eyelets upon a rod or stem, from which they may be delivered, one at a time, to the carrying apparatus, as described.

No. 11,261.—AMOS LYON.—*Improvement in Lightning Rods.*—Patented July 11, 1854.

The nature of this invention consists mainly in the use of sheet copper, or other metal to produce the same result, made in such a form for a lightning-rod as to present to the electrical atmosphere a proportionally large amount of surface with a smaller amount of metal than is ordinarily used for the same purpose. The rod is made continuous when adjusted on a building, by letting the ends lap in the manner as shown in the drawing at B B.

Claim.—The metallic surface lightning-rod, made in the form herein described, or in any and every form where sheet copper, sheet brass,

or iron, (either of which may be coated with metal or not,) and where the surface is all, or nearly all, exposed to the electrical atmosphere, and is adapted to present points upon its edges throughout its entire length, according to the mode herein described.

No. 11,262.—SAMUEL HUNT.—*Improvement in the Method of Detaching Harness from Horses.*—Patented July 11, 1854.

The object of this invention is to release the horse from a carriage instantly, by means of a cord attached to the apparatus which constitutes this invention, the nature of which consists in fastening together the two sections of the saddle, which is divided vertically in the centre, the fastening apparatus being a spring-bolt running through a tongue and groove near the front of the saddle-tree, other portions of the harness being so constructed as to admit of being detached by analogous means.

Claim.—Uniting the two sections of a saddle-tree by a tongue projecting from one section and fastened in a corresponding groove in the other by a metal shaft and spiral spring, the whole being entirely concealed from view, and arranged and operating as described.

Also, arranging a set of terrets in two sections, each fitting into a dovetailed groove in the top of the front of one section of the saddle-tree, operating as specified.

No. 11,263.—HIRAM W. HAYDEN.—*Ornamenting Metallic Buttons.*—Patented July 11, 1854.

This invention consists in submitting the blank to the separate operations of deadened and bright dies *g* and *h*.

Claim.—The method of ornamenting metallic buttons and similar articles by submitting the same to the separate operations of deadened and bright dies, constructed substantially as set forth for the purposes, and operating as specified.

No. 11,264.—JONATHAN BALL.—*Improved Mode of Connecting Water-Pipes.*—Patented July 11, 1854.

This invention consists in casting a boss of soft metal onto the metallic tube *b*, and inserting a tube *c* by screwing it firmly, and then by passing a boring tool through the tube *c*, drilling the main pipe *b*, and thus constructing the water-pipes.

Claim.—The cock attached to the metal tube *b* in combination with the boring tool inserted through the cock, by which the pipe and cement are perforated in the manner as specified.

No. 11,265.—HARVEY and S. E. CROSBY.—*Improved Mode of Arranging Arch-Boards for Cistern-Arches.*—Patented July 11, 1854.

This invention consists in constructing an arch-board upon which to lay the brick or stone of a cistern-arch of angular curved segments or

sections A A, of such size that they can be drawn out through the throat of the cistern when the arch is completed, with dowels, or hooks and staples C D, so arranged as to be readily put together and taken apart.

No. 11,266.—JAMES A. CUTTING.—*Improvement in Compositions for making Photographic Pictures.*—Patented July 11, 1854.

This improvement relates to photographic pictures obtained on a prepared film, upon the surface of glass or other transparent medium.

The film employed is collodion, prepared as follows: Three ounces troy of pure, dry nitrate of potassa, pulverized, is mixed with 3½ ounces, fluid measure, of pure sulphuric acid. In this liquid 80 grains of clean, dry cotton is immersed, and kneaded about five minutes; the cotton is then taken out and washed, to remove every trace of acid. It is now found that the quicker it is dried, the better will be the collodion made of it; this is accomplished by displacing the water from the cotton by strong alcohol. A bath of 10 ounces sulphuric ether [60 Beaumé] and six ounces of alcohol is prepared, and the cotton prepared as above is added until the solution is of the thickness desired to coat the glass.

To excite this collodion take a deep one-ounce vial, introduce 2½ grains of bromide of potassium, add water drop by drop, to make a saturated solution; in this solution dissolve 2½ grains of iodide of potassium, and add one ounce of collodion, which, after being spread on the glass plate, is immersed in a bath of 30 grains nitrate of silver, two grains iodide, and one ounce of water. The negatives taken with the above are fixed and developed as usual.

Claim.—The use of alcohol to deprive the cotton of water, and the employment of bromide of potassium in combination with collodion, &c.

No. 11,267.—JAMES A. CUTTING.—*Improvement in Photographic Pictures on Glass.*—Patented July 11, 1854.

After a photographic picture has been fixed on glass in the usual way, another glass of the same size is prepared, and the two glasses are then connected together by a thin film of the balsam of fir, which encloses the film of collodion on which the picture is made between them, thus insuring its preservation from atmospheric effects, improving its appearance, &c.

Claim.—The combination of balsam with photographic pictures on glass, and with the additional glass, by which they with the balsam are hermetically sealed.

No. 11,268.—GEORGE F. FOOTE.—*Improvement in Ventilating and Heating Railroad Cars.*—Patented July 11, 1854.

By this combination of devices the air to be supplied to the interior of the car is taken from the top and outside, and passed down through

a shower of water to separate the dust, cinders, &c. Subsequently it is passed around or near a stove to be warmed, and through various openings in the floor of the car it is distributed uniformly to the interior.

Claim.—The arrangement and construction of the apparatus above described, or other made substantially the same, for ventilating a railroad car with purified or heated air, or both, as above set forth.

Also, the diffuser and its equivalents, for the uses and purposes herein specified.

No. 11,269.—HENRY PHILLIP GENGEMBRE.—*Fusible Marble.*—Patented July 11, 1854.

The residue of tar distilled at 300° Fahrenheit left in the retort is mixed, while yet hot, with previously pulverized and mixed clay and loam; the mixture having boiled for some time, sand and fine gravel are stirred in. This cement is asserted to fuse at 500° Fahrenheit, and to admit of being cast and polished.

Claim.—The process of preparing fusible marble by adding asphaltum, or mineral pitch, aluminous clay, calcareous loam, and silex, in or about the following proportions, viz: aluminous clay 60 to 75 per cent., calcareous loam from 10 to 20 per cent., pitch from 30 to 40, and silex in quantity sufficient to give the desired hardness. The quantity of pitch is to be increased or reduced according to the temperature, or purposes for which the manufactured article is to be used.

No. 11,270.—ROBERT T. FRY.—*Improvement in the Construction of Inkstands.*—Patented July 11, 1854.

This is a two-part inkstand, with an elastic disk *f* secured to the upper part, and dividing it from the lower. The two parts are held together air-tight by a flanged cap or ring *d*, the ink being delivered through the funnel *e*; the advantages gained being the facility with which the top can be removed, by loosening the collar from a simple fastening on the base.

No. 11,271.—RUFUS PORTER.—*Improvement in Walking-Canes convertible into Chairs.*—Patented June 26, 1854.

Claim.—Constructing a chair or table by hinging four arms and four legs to a hub or hubs C, attached to or mounted upon a central vertical shaft B, and supporting said arms and legs by radial braces, which connect said arms and legs to sliding sockets E, in such a manner that the arms and legs may be closed up to a compact form, as described in specification.

No. 11,272.—J. RABBETH.—*Improvement in Diaper Locks.*—Patented July 11, 1854.

The nature of this invention consists in arranging a slotted tube C permanently on one end of the pin-holder A, and inserting in said tube

another slotted tube D, which is capable of revolving. The slots in the tubes allow the point of the pin to pass into the inner tube, and when said tube D is turned, the pin is perfectly secured.

Claim.—The combination of the slotted permanently fixed tube C with the revolving slotted tube D, arranged and operated in the manner described, for the purpose specified.

Figure 2 represents a section on a larger scale.

No. 11,273.—THOMAS B. SMITH.—*Improvement in Cow-Catchers.*—Patented July 11, 1854.

The nature of this invention consists in having the two forward axles of a locomotive truck provided with screw-threads, reversed to each other, with which the frame of a forward projecting beam may be engaged alternately at the pleasure of the engineer, so as to sweep over the cow-catcher to the right or left as desired, in order to remove any obstructions taken up by the cow-catcher.

Claim.—The beam or scraper B in combination with the nut-piece C and screws a a^1, arranged and operating as herein described, to produce the alternate lateral movement of the beam over the surface of the cow-catcher, for the purposes set forth.

No. 11,274.—FRANKLIN G. SMITH.—*Improvement in Condensers for Steam-Engines.*—Patented July 11, 1854.

The invention consists in making the two tubes of two metallic plates, one thick with holes through it at varying distances, and the other thin without holes.

Claim.—The mode of constructing such tubes, by which the two offices of assisting the atmospheric pressure and transmitting the caloric of the steam to the surrounding cold water through the intervening metal of the tubes are separated, the pressure-resisting strength being gained from an interior tube of stiff metal having innumerable holes punched through it, and this being surrounded by a water-tight covering of thin sheet-copper or other suitable material, against the internal face of which the steam impinges by passing through the perforations in the strong inner tube, and is thus brought into the nearest possible contact with the surrounding cold water.

No. 11,275.—JOSIAH M. SMITH.—*Improvement in Machines for Planing Stone and Metal.*—Patented July 11, 1854.

The object of this invention is to finish the surface traversed by the cutters a^1 b^1 c^1 d^1, before moving the metal or stone for a new cut. The cutters are of various shapes, and are placed in a revolving head or clamp C and brought to bear upon the material, one after the other, until the surface is finished in the line of their operations.

Claim.—The revolving disk C, containing a series of cutters sufficient

for completing the planing of a portion of the surface of an object, in combination with the rest or slide E, substantially in the manner set forth.

No. 11,276.—WILLET THOMPSON.—*Improvement in Ship Ventilators.*—Patented July 11, 1854.

The method of actuating disk ventilators by inclines has heretofore been used. In this invention the cap D, which closes the flue, is kept open and shut also by the spring F when turned off the incline *b b*, this latter device being used to keep it permanently open or shut.

Claim.—The combination and arrangement herein specified of the elevating spring F with the cap D, and its tightening inclines *b b*, for locking the cap when closed, the whole being constructed and operating as shown and described.

No. 11,277.—WILLIAM H. FULLERTON.—*Improved Machine for Hackling Corn-Husks.*—Patented July 11, 1854.

This invention consists in constructing the teeth, situated on the surface of the cylindrical drum of the machine, of an oval shape in their cross-section, and arranging them in such a manner that the longer axis of the oval shall be in the line of the greatest strain.

The drawing represents a cross-section and a side view of the oval-shaped tooth.

Claim.—The particular form of the teeth employed, of whatever material they are made, arranged in any way, on drums or otherwise, and the particular application of them for hackling corn-husks.

No. 11,278.—PETER SWEENEY.—*Improvement in Hot-Air Furnaces.*—Patented July 11, 1854.

The movable deflector g^1 l^1, suspended in the fire-chamber, is made in two parts, from between which air is admitted above the burning fuel. A dividing plate in the upper part of the fire-chamber regulates the distribution of heated air to separate parts of a building.

Claim.—The making such air-supplying apparatus movable and adjustable within the fire-pot or chamber, substantially as specified, for the purpose of adapting it to the varying height and condition of the charge of fuel, to effect the economical combustion thereof.

Also, making such air-supplying apparatus in two parts, substantially as specified and for the purpose specified.

Also, dividing the hot-air chamber into two or more compartments by partitions provided with apertures governed by dampers or valves, substantially as specified, for the purpose of regulating the supply of air to separate parts of a building, as circumstances may require, as set forth.

No. 11,279.—GEORGE WRIGHT.—*Improvement in Self-Acting Mules for Spinning.*—Patented July 11, 1854.

Claim.—Driving the carriage in and out by the continuous motion of the cone pulleys, in combination with some method of automatically shifting the belt, for the purpose of adapting the speed of the carriage to the requirements of the different parts of its traverse; by which means the complicated mechanism heretofore adopted for the attainment of the same end is dispensed with.

Also, the pulleys F and H on the shaft G, by which a continuous motion in one direction is given to the shaft G for the purpose of driving the carriage, and an intermittent motion to the twist-pulley D^1, when the winding on is accomplished by mechanism independent of the twist-pulley.

Also, the friction-pulley F^1, or its equivalent, in combination with any efficient method of regulating the speed of the spindles by the tension of the yarns as set forth; by which means the complicated machinery heretofore used to regulate the winding on is dispensed with, and the machine is enabled to run at a higher speed than can be attained in machines where heavy cogged gearings are constantly to be reversed.

No. 11,280.—WASHINGTON SPANGLER, assignor to W. SPANGLER, E. F. CHAMBERS, and WILLIAM F. WILSON.—*Improvement in Augers, Gimlets, &c.*—Patented July 11, 1854.

The drawing is a perspective view of the improvement.

Claim.—Inventing and constructing augers and gimlets out of any desired shape of metal, by filing, turning, or in any equivalent manner, or using tapering pieces of metal concave on one or both sides, and forming two bevel-cutting edges *d d*, on graduated or regularly diminished conical twists *o o*, as shown in the drawing, and substantially as described.

No. 11,281.—THOMAS W. GILLETT, assignor to JOHN MATHEWS.—*Improvement in Machines for Bottling Mineral Waters or Liquids under Pressure.*—Patented July 11, 1854.

The improvements consist in a safety-guard B^1, so constructed that the movement of the operator which brings the filling-socket *a* upon the neck of the bottle *e* also raises said screen B^1 around the bottle itself; so that, should it burst, the fragments will be retained within said screen, and cause no injury to the operator.

Claim.—Combining the safety cylinder or screen with the cross bar *d* of the charging-socket, or other proper part of the bottling machine; so that the said screen will surround the bottle at the same time that the charging-socket is brought over the neck of the bottle, and kept there until the filling and corking has been completed, substantially in the manner and for the purposes set forth.

No. 11,282.—Ann G. V. McKinstry, administratrix of William McKinstry, deceased.—*Improved Adjustable Bearings for Circular Saws.*—Patented July 11, 1854.

Claim.—The bed-plate E, carrying the boxes D D, in combination with the set-screws *d d*, holding bolts *f* and *g*, shaft C, and circular saw B.

Figure 1 is a plan of the improvement.

Figure 2, a side-elevation.

Figure 3, the bed-plate detached.

No. 11,283.—Eden A. Baldwin 2d, administrator of Eden A. Baldwin, deceased.—*Improvement in Fire-arms.*—Patented July 11, 1854.

This improvement and claim consist in the peculiar arrangement and combination of the movable slide-chamber and loading magazine, whereby a series of charges or cartridges are successively carried from the magazine to the barrel by one sliding-chamber only.

Also, the combination of the depressing chamber or slide L and the tubular loading magazine, with the mechanism for removing the cartridge into the depressing-chamber when depressed into line with the loading magazine, as specified.

Also, the combination of the circular arc-projection *c*, and the correspondingly curved recess R, with the slide L and the lever K, and mechanism by which the cartridges are drawn towards the chamber of the slide L; the same being for holding the block L in place, or at rest, while the toothed sector *b* is out of engagement with the rack *h*, and the lever K is in movement to actuate the rod I, as described.

No. 11,284.—George A. Leighton, assignor to Nehemiah Hunt.—*Improvement in Sewing Machines.*—Patented July 11, 1854.

The nature of this invention will be understood by referring to the drawings and claim.

Claim.—Combining with the longitudinal movements of the two needles of the sewing machine, lateral movements of one needle, so that the forward and backward movements of each needle shall be respectively on opposite sides of the other, (instead of on the same side of it,) whereby the crossings of the loops are made to be drawn into or directly over the holes made through the cloth, and so as to produce a very flat seam.

No. 11,285.—Thomas Clegg, assignor to Clegg and Stevens.—*Improved Machine for making Heddle-Eyes of Wire.*—Patented July 11, 1854.

The nature of this invention will be understood by referring to the claim and the drawing.

Claim.—The combination of pressure-jaws or mechanism with machinery for doubling and producing the twist in the wire, the said pres-

sure-jaws or compressing mechanism being for the purpose of flattening the twists of the wire, substantially as specified.

Also, in combination with the pressure-jaws or mechanism and the mechanism for producing doubling and twisting the wire blank, the movable carriage f^1 and its jaws d^1 e^1, or mechanical equivalents thereof, made to operate substantially as set forth.

Also, the combination of the stationary rest *t* and movable disk *s* with the slide or bender *m*, the shaft *k*, and the rotary notch-gear v^1, the whole being made to operate together, substantially as set forth.

No. 11,286.—Wm. G. Casselman, assignor to Elias A. Swan.—*Improvement in Machinery for Carving Marble, &c.*—Patented July 11, 1854.

This improvement pertains to that class of marble or other carving machines in which the article to be carved receives a reciprocating or rotary motion from its bed, while the tool has also its horizontal and vertical motions, and consists both in the adaptation of various pattern-wheels as controllers of the motions of the tools, and in an improvement upon the cutting itself.

The nature of this improvement will be sufficiently understood by comparison with the accompanying drawings.

Claims.—1st. The means herein described and shown for carving or cutting marble or other material, consisting of the adjustable or movable blocks or patterns (see 11, 13, 25, 26, g^2 and l^1) on a revolving wheel or wheels *f h*, &c., for determining the position of the cutting-tool or tools 10, either horizontally or vertically, in combination with a revolving or reciprocating bed d^1 as specified.

2d. Communicating motion from a pattern-wheel or wheels *s* constructed with movable or adjustable patterns, both on the circumference and on the sides 41, to the sliding tool or tools, by means of levers *w w* and *u* u^1, so set and operating as to place said tools in the required position as the parts move. (The parts referred to in this part of the claims are represented in figures 2 and 3, and are not shown in figure 1.)

3d. Constructing a cutting-tool or tools for carving marble or similar substances with blades or tools 21, 22, attached to the bottom and side of the stock *i*, which stock is so fitted as to receive a rotary motion, to operate as specified.

No. 11,287.—A. C. Gallahue.—*Improvement in Boot and Shoe Pegging Machines.*—Patented July 11, 1854.

This improvement pertains to a description of shoe-pegging machines before patented by the same inventor, and consists in placing upon the movable carriage B a rocking bed-plate C, upon which the shoe to be pegged is mounted. The bed-plate is attached to the carriage by pivots *b b*, and governed by a spring I, by which the edge of the sole of the shoe is made to bear against the gauge-block G, whereby the equidistance of the pegs from the edge is secured without the necessity of a cam or pattern.

Claim.—The employment or use of the rocking bed-plate C, when

such bed-plate is attached to a movable carriage B, as herein shown and described, for the purpose of causing the edge of the sole of the boot or shoe to bear against the gauge-block, as the carriage is moved, without the intervention of a pattern or cam.

No. 11,288.—RUSSELL D. BARTLETT.—*Improved Machine for making the Heads of Shovel Handles.*—Patented July 11, 1854.

Figure 1 presents a plan of the machine.

Figure 2, a front elevation.

Claim.—So constructing the dished wheel F and its cutters *i*, (applying them together as described in the specification,) in combination with so constructing the bearing-rest G with a shaft *l* and bearer-plate *m*, (or equivalent contrivances,) and applying it to the wheels, as to cause it to extend within the wheel, and enable a person to introduce the shovel-head into it, between it and the inner surface of the wheel, and support said shovel-head and turn it against the cutters, so as to cut it curved in two directions, as specified.

No. 11,289.—ANDREW LANERGAN.—*Improvement in Lanterns.*—Patented July 11, 1854.

Claim.—The combining with the lantern the mouth-tube, so as to enable a person to put out the flame of the lamp, substantially as described.

No. 11,290.—CHARLES METTAM.—*Improvement in Constructing Iron Houses.*—Patented July 11, 1854.

This invention consists in erecting the columns A^1 of the upper stories upon chairs C C, which can be adjusted easily to any desired position on the breast-summers B B, and which, when placed directly over the columns below, serve to connect the breast-summers in such a way as to provide for their longitudinal expansion and contraction.

Claim.—To the combination of the chairs C C with the breast-summers B B and the columns A, substantially in the manner herein set forth.

No. 11,291.—JOSEPH T. MARTIN.—*Improved Grapnel for Raising Sunken Vessels.*—Patented July 11, 1854.

This invention consists in a wooden frame T, graduated to the width of the beam of a vessel, with a series of arms B B, and claws or hooks P P and C C; said beam to be lowered on to the hull of the sunken vessel, and claws C C to take hold inside, and claws P P outside, of the frame; the whole to be raised by chains connected with suitable apparatus above.

Claim.—The combination of the plates, levers, and iron bars with the timber, constructed in the manner described, to form a marine

grapnel to be used in the raising of sunken vessels, as being a more expeditious method of getting fast of sunken vessels than by the old-fashioned way of sweeping by chance, which is not always successful, and in all cases is more expensive than it would be if the marine grapnel was used.

No. 11,292.—HENRY OUTCALT.—*Improved Mode of Constructing Metallic Roofing.*—Patented July 11, 1854.

This invention consists in constructing a roof of plates of metal with the edges scrolled or rolled up, *d*, and each plate slipped one over the other, thus forming a strong and water-tight roof, and allowing for expansion and contraction.

No. 11,293.—WILLIAM LOUGHRIDGE.—*Freeing Canal Boats from Water.*—Patented July 11, 1854.

The invention, as claimed, consists in the arrangement of float B, valve *e*, and bent-tube *b*, in the bottom of the boat; by which the discharge of water is rendered automatic, and the boat freed from leakage.

No. 11,294.—WILLIAM LOWE.—*Improvement in Cut-off Valves of Steam-Engines.*—Patented July 11, 1854.

This invention consists of the double rocking-shaft, one, C, passing through the other, A, the outer shaft to work the catches F and exhaust-valves E, and the inner shaft actuated by the catches to open and close the steam-valves D, and to effect the cutting off of the steam, in combination with the other parts of the mechanical movements, or their equivalents, as herein described.

No. 11,295.—JAMES C. KENNEDY.—*Improvement in Elevated Ovens used with Cooking Stoves.*—Patented July 11, 1854.

The claim designates the novel arrangement of parts comprised in this invention.

Claim.—The combination of two or more ovens in the elevated oven-chamber or shell, with flues for hot air between each end of the chamber and one of the ovens.

Also, with a flue between each oven, all the flues being provided with regulating dampers for the proper management of said oven and flues, substantially as described.

No. 11,296.—ABEL GREENLEAF.—*Improved Water-Wheel.*—Patented July 11, 1854.

The nature of this improvement consists in attaching to and combining in a laterally discharging water-wheel a series of vertical and

horizontal flanges, or buckets, constructed and arranged as described in the specification.

Claim.—The combination of the horizontal buckets C with the vertical buckets B, substantially as described.

No. 11,297.—JOEL GREEN.—*Improvement in Hermetical Sealing.*—Patented July 11, 1854.

The object of this invention is the soldering or otherwise sealing a preserving canister or other vessel while within an exhausted chamber *a*, and while subject to the operation of heat. Solder being placed in suitable proximity to the perforations left in the cans for escape of air, and the cans being placed upon the plate *e*, and the heated bit *s* attached to the lower end of the rod, the receiver *a* is closed down over the cans, and steam is applied to either the coil *j* or the jacket *i*, or to both, and continued until the cans rise to such a temperature as will evolve vapor by the application of pump *b*, which being effected, the bit is promptly brought to bear upon the solder of one can after another.

Claims.—1st. The application of a steam-jacket, coil, or equivalent device, to an exhausted receiver, in connexion with a soldering apparatus, for the purpose of sealing or soldering preserving canisters, &c., under the combined agencies of heat and vacuum, for the purposes explained.

2d. The combined ball *m* and sliding air-tight joint *p* of the rod, as described, permitting the heating, insertion, and the vibratory longitudinal and revolving motion of the soldering bit, while excluding the external atmosphere, for the purpose of soldering in vacuo, as herein explained, and enabling the direct application of the heated bit without the intervention of any other substance.

No. 11,298.—ROBERT W. GENUNG.—*Improvement in Lifting-Jacks.*—Patented July 11, 1854.

Claim.—Making the lever capable of being adjusted so as to be thrown in and out of contact with the rack-bar with facility and ease, and retaining it securely in its place, after being adjusted, by providing the bearings *d d* with a curved slot *e* and two semicircular fulcrum rests.

No. 11,299.—WILLIAM P. CHADWICK.—*Improvement in the Whale-Blubber Press.*—Patented July 11, 1854.

The following claim explains the nature of this improvement.

Claim.—The arrangement of the screw D within the body of the box A, in connexion with fixing it firmly and immovably to the platen *c*, and so applying to it, and to one end or the bottom of the box, a rotary screw-nut and a set of gears and a crank-shaft, that by revolution of the screw-nut the platen will be forced towards the top (or other end of the box); the said arrangement and application of the power that operates the platen enabling the inventor to make a much

more compact, efficient, and desirable blubber-press for ships' use than that heretofore patented by the inventor.

No. 11,300.—STILLMAN A. CLEMENS.—*Improved Valvular Arrangement for Diaphragm Pumps.*—Patented July 11, 1854.

The drawing is a central vertical sectional view of the pump, in which *d* represents the lever-stand, that serves as a packing-box for the pump-rod *e; a* and *b* are the upper and lower shells, united by flanges, between which at *f* is secured the periphery of the diaphragm *h; g* is a perforated disk that has a washer extending downwards from its lower fall, and lying upon the diaphragm where the pump-rod passes through it. Below the diaphragm is another disk *i*, that is secured to the pump-rod by a nut below, and is not perforated. That part of the diaphragm covered by the lower disk is perforated. *j* is a check-valve provided with pins that pass into the inlet-tube *k* to keep it in place.

Claim.—The mode of constructing and operating the valve, as set forth, in combination with flexible diaphragms; the valvular openings being in the diaphragm itself, or in a part of it, and the valve being attached to and worked by the piston in such manner that the diaphragm shall move to and from the fixed valve, and close and open the holes in the diaphragm valve.

No. 11,301.—ALFRED BURWELL.—*Improved Method of Stretching Shoes.* Patented July 11, 1854.

The nature of this invention consists in cutting a common last of any desired size, longitudinally and horizontally through its entire length, from heel to toe, and nearly parallel to the bottom, and then introducing into the ankle or comb of the last expanding screws B and E, by which the last is made to expand or contract at different points at pleasure. Also, in introducing plates C and G between the two parts of the last; by means of which a lateral pressure may be made when necessary, by means of a screw for that purpose.

Claim.—The construction and use of lasts, to be operated by two independent screws, in such a manner as to be able to stretch the shoe or boot at the instep or toe at pleasure.

Also, the expanding plates, with their projecting pieces of metal applied, operated by the wedge or cone-pointed screw.

No. 11,302.—ADOLPH and FELIX BROWN.—*Improved Hat-Shaping Machine.*—Patented July 11, 1854.

This machine consists of two segments A A, connected through the coupling B, having on one side a right-handed, and on the other a left-handed screw, which fit in corresponding bases fast on the segments; by means of which, by turning the coupling B either to the right or left, said segments are capable of being brought nearer together or further apart. Instead of making the screws in one piece with the

coupling, the same may be made fast to the segments, and made to enter into the coupling. From each end of the segments, and running as far as practical towards the centre, are parallel grooves C, into which two or more pieces *o* are fitted, flush on the outside of the segments, and capable to be moved backwards or forwards in said grooves, and held in any desired position by the nuts D, on the inside of the segments. The shape of the segments conforms to the interior circular shape of the hat.

Claim.—The application of the movable pieces *o*, with their set-screws S, working in a groove made in the segments, or the equivalents thereof, and bearing against any desirable point of a flexible plate fitted round the outside, thereby giving the same any desirable shape, for the purpose specified.

No. 11.303.—F. B. SMITH.—*Improvement in Lifting-Jacks.*—Patented July 11, 1854.

The nature of this invention consists in forming a curved oblong slot D in each of the ears C, cast on the standard B, or guide-frame, in combination with a double-acting pawl G; said slots serving for the fulcrum F of the lifting-lever E to turn in, while the rack-bar A is being elevated, and also allowing the fulcrum of the lifting-lever E to have sufficient play to admit of the lifting-lever being moved out of contact with the teeth of said bar, and the double-acting pawl serving, when not in use, for preventing the rack-bar from falling, and the said lever is moved out of contact with the rack-bar, and its fulcrum caused to occupy a position in the upper part of the curved stop, to prevent all possibility of the fulcrum slipping down to the bottom of the slot, and thereby allowing the lever to come again in contact with the rack-bar while descending.

Claim.—The curved oblong slot D in combination with the double-acting pawl G and tooth *b* on the lever E, so that the lever may be adjusted as described, and, after being adjusted, prevented from again falling and coming in contact with the rack-bar before it has entirely descended.

No. 11,304.—ALBERT S. SOUTHWORTH and JOSIAH J. HAWES.—*Mode of Taking Daguerreotypes for Stereoscopes.*—Patented July 11, 1854.

Claim.—A method of taking stereoscopic pictures, in which the two positions of the camera are upon a line making an angle of 45° with the horizon. It is accomplished by placing the camera as represented at figure 1, and after taking one picture changing its position to that represented at figure 2, and taking the other picture.

No. 11,305.—R. H. ST. JOHN.—*Improved Bedstead-Fastenings.*—Patented July 11, 1854.

The patentee disclaims the invention of the clevis, staple, and key, or wedge, as original devices.

Claim.—The clevis-clamp *a*, together with the double-mortised post, in combination with the key or wedge *b*, through all of which is produced a compensating bedstead-fastening, specifically as described and delineated.

No. 11,306.—WILLIS STRAW.—*Improved Chain-Hook.*—Patented July 11, 1854.

This invention consists in attaching to a common chain-hook a safety iron guard F by means of a toggle-joint and rivet, which shuts down over the point of the hook I, thereby strengthening the hook and preventing it from catching, unhooking, and injuring the cattle.

Claim: to the iron guard, and the manner of attaching it to the hook.

No. 11,307.—GEORGE B. SNOW.—*Improved Mode of Ringing Bells by Steam.*—Patented July 11, 1854.

The machinery is so constructed that a cylinder D, open at one end, admits of a piston acting by a head of steam in one direction only, so that a bell may be raised by a crank C and allowed to return by its own gravity, thus giving freedom and motion to ringing the bell more clearly than by the ordinary process of ringing by a double-acting steam-piston.

Claim—The manner herein described of ringing the bell by the application of steam-power and the gravity and momentum of the bell combined, by means of the direct-acting engine, attached by chain, or other equivalent mechanical device, to the bell, and arranged, combined, and operating with the bell as specified, and so that the bell is swung in one direction by the engine, and then let loose or free to swing back in the opposite direction by its own gravity and momentum to produce the ring or sound, and the steam alternately admitted and exhausted from the engine by the action of the engine and movement of the bell combined, substantially as specified, whereby the same freedom in the swinging of the bell to produce a long and clear sound as is produced by the ordinary manual process, but with greater regularity and consequent increased clearness of note, is automatically obtained, as herein set forth.

No. 11,308.—JABEZ C. TERRY.—*Improved Screw-Wrench.*—Patented July 11, 1854.

The invention consists in attaching the shank C of the inner and stationary jaw B to the handle A by means of straps *c c*, or their equivalents, attached to the lower end of the shank; the straps passing through the screw-nut F and into the handle, and having grooves or recesses *d d* in them, which when the straps or handle are turned receive projections *b b* on the top of the handle, as herein shown and described.

No. 11,309.—THOMAS B. WOODWARD.—*Improvement in Mills.*—Patented July 11, 1854.

The claim clearly indicates the nature of this invention. The upper stone is permanently fixed by the screws *b;* the lower stone may be elevated or depressed by I J H. The nuts S T are fixed upon the spindle, and are moved vertically together to make an adjustment.

Claim.—The combination and arrangement of one or more cylindrical bruising or grinding nuts and chambers, or cylinders, with the stones of the mill, in such manner that the relative distance of the stones to each other may be varied without increasing or diminishing the distance of the acting surfaces of the nuts and cylinders, substantially as described.

No. 11,310.—MOSES D. WELLS.—*Improvement in Brakes for Light Vehicles.*—Patented July 11, 1854.

This invention consists in subjecting the brake-rubbers to the influence of intermediate springs *c c*, so arranged with respect to the rubbers that they will prevent within certain limits the direct action of the horse upon the rubbers, and permit the rubbers to operate notwithstanding the slight movements of the connecting-levers, caused by inequalities in the road, thereby obviating the constant jerking of the rubber from the wheels, caused by a single system of springs.

Claim.—To the combination of the two systems of springs with rods and levers, for so operating the brake-bar that the movement of the levers within certain limits shall have no action on said bar, as and for the purposes herein fully set forth.

No. 11,311.—WILLIAM E. WARD.—*Improved Mode of Manufacturing Iron Slats for Window-Blinds.*—Patented July 11, 1854.

This invention consists in making the slat of sheet iron doubled and bent throughout its entire length in the direction of its cross-section to near each edge, curved in opposite directions, and with a bead *b* in the middle on both faces to contain the wire which forms the journals at both ends.

No. 11,312.—JOHN STOUFFER, PETER BROUGH, and JOHN W. BARR.—*Improvement in Flouring and Bolting Process.*—Patented July 11, 1854.

Claim.—The arrangement of the bolts A and B, pipes E E, screw-conveyor F, and spout G, by means of which the specky flour first passes through the upper bolt A, is rebolted by being mixed with the stuffs (containing the bran) as received from the main burrs; by which the quantity of superfine flour is increased, while the quality or brand is maintained, substantially in the manner set forth.

No. 11,313.—Orin W. Fiske.—*Improvements in Machine for Manufacturing Paste-Board.*—Patented July 11, 1854.

The object of this invention is to apply paste to three rolls of paper at one and the same time, and to bring and compress them together, forming pasteboard. In the accompanying drawing, B and C are two cylindrical brushes, which are placed one above the other, and in contact, or nearly so. Each of these brushes works in contact with one or more paste-rollers D E, or F G. Each paste roller revolves in a trough, H, I, K, or L, for containing paste. P Q R represent three rolls of paper, from which three strips of paper M N O are led in contact with the paste-brushes B and C. The strip M is carried over with its under surface in contact with the top surface of the brush B. The middle strip N is carried between two brushes, so that not only its upper surface may be in contact with the surface of the upper brush, but that its lower surface may also be in contact with the upper surface of the lower brush. The third strip O is carried underneath and in contact with the lower brush C. From the brushes the three strips are carried towards a roller V, where they are brought in contact, and are all three made to pass together between two compressing rollers S T.

Claim.—The combination and arrangement of the cylindric paste-brushes, with three rolls of paper, and compressing and draught-rolls, whereby the two cylindric brushes are made to apply, at one operation, the paste to the under side of the upper strip of paper, the two sides of the middle strip, and the upper side of the lower strip.

No. 11,314.—Jacob J. Hatcher.—*Improved Pen and Pencil Case.*—Patented July 11, 1854.

The invention consists in permanently attaching the pencil A to the case in such a manner that the pen-holder F, containing the reservoir for leads formed by the tubes J and K, may work over and independent of the pencil, and protect it from injury when not in use.

When the pen is wanted, it is only necessary to reverse the position of the holder F J K.

Claim.—1st. The permanent attachment of the pencil to the case, operating by the tube as set forth. 2d. The hollow reserve for leads, with the pen-holder, working substantially in the manner set forth.

No. 11,315.—Matthew Walker, senr., assignor to M. Walker and Sons.—*Improved Iron Picket Fence.*—Patented July 11, 1854.

The drawings show the fence in perspective, and also a plan of the rails previous to the insertion of the pickets. The inventor *claims* the mode of making wrought-iron fences in the manner set forth; which consists in a compound wrought-iron rail composed of wrought-iron bars, corrugated by dies, so that they shall embrace the post or pickets at the proper intervals, and have their inner surfaces in contact between each, so that they may be riveted, in order to make a neat and firm fence.

No. 11,316.—WILLIAM E. BIRD.—*Improvement in Steam-Boiler Furnaces.*—Patented July 18, 1854.

The improvement and claim consist in the combination of the lower boilers or boiler A, and the upper boilers or boiler A^1, with each other, and with the furnace C, in such a manner that the top of the furnace will be formed by the upper boiler or boilers, and the rear of the furnace be principally formed by the lower boilers, while the flue-space from the surface passes between the upper and lower boilers, and communicates with the flues, returning through the lower boilers, substantially as herein set forth.

No. 11,317.—ISRAEL F. BROWN.—*Improvement in the Ribs of Cotton-Gins.*—Patented July 18, 1854.

The object of this invention is to construct the ribs in such a manner that the part of the ribs which wears out may be several times removed without taking the bars from the machine.

Claim.—The employment of a series of cast-iron ribs C, each having two or more arms *a a* a^1 cast with them, each of which arms is of proper form to combine with a short rib A, and with it form a complete rib, whereby, when the said hubs are secured upon a shaft B, arranged in a proper position, their arms may be successfully brought into combination with the short-ribs, for the purpose of renewing the wearing parts.

No. 11,318.—LEANDER W. BOYNTON.—*Improvement in Preparing Flock for Felting.*—Patented July 18, 1854.

This invention consists in preparing the flock, and spreading it on the web of wool, for making felt-cloth, &c., by the use of a revolving brush with one or more stationary brushes fitted on a concave, and a wire screen at the bottom to prevent any flock not fully prepared from falling on the web of wool, but allowing the brush to carry it up again, that it may be worked continually until it is prepared to pass through the screen.

Claim.—The combination of a wire-screen D with a revolving cylindrical brush E and one or more stationary brushes B, when the screen is placed below the revolving brush to prevent any of the flock from falling on the web of wool before it is fully prepared; and also to assist in preparing the flock, when the whole is constructed and combined substantially as described.

No. 11,319.—HUGH BURGESS.—*Process for Coating Iron with Copper or Brass.*—Patented July 18, 1854; in England, February 7, 1853.

The iron is first well cleaned with dilute sulphuric acid, then washed in a solution of chloride of zinc or any salt of tin or cadmium, then dried and heated to about 250°, and plunged into molten copper or alloy thereof, through a layer of powdered charcoal, sand, or the like,

After a few minutes it is withdrawn into a tank filled with an atmosphere of steam and carbonic acid or carburetted hydrogen, or any disoxydizing gas flowing in streams or jets, where it remains until cool.

Claim.—The coating of iron sheets, bars, bolts, and other forms of iron, with copper or brass, by a combination of processes, as set forth.

The drawings 1, 2, 3, represent the vat used by the inventor, filled with molten copper or alloy thereof, for coating bolts and similar small articles. Figure 4, a tool to grasp small articles to be plunged into the molten metal.

No. 11,320.—Lewis R. Conard.—*Improvement in Slide-Valves.*—Patented July 18, 1854.

The claim is to forming the passages through the valve, so that the oblong steam and exhaust openings shall enter from the upper and lower surfaces longitudinally to its motion, and leave the opposite surfaces transversely thereto, as herein described.

No. 11,321.—Thomas Crossley.—*Improved Method of Making Printing-Blocks.*—Patented July 18, 1854.

Wooden blocks are cut with fine saw-kerfs *a*, in the usual manner, and the prismatic pieces are removed from the block, between the saw-kerfs, on those parts not covered by the figure. Gutta percha is then forced, while in a softened state, into the saw-kerfs, so as to fill them as represented at *b*, which binds together the pieces forming the pattern, and form a superior and durable printing-block.

Claim.—The within described method of making printing-blocks, the surface of gutta percha being applied to the surface of the wood, in the manner and for the purpose set forth.

No. 11,322.—Samuel and Thomas Champion.—*Improvement in Iron Bridges.*—Patented July 18, 1854.

This improvement and claim consist in the combination of tubular braces, or struts, made smaller by gradation, or tapering, as they extend from the pier or support, with suspension rods, also made smaller by gradation, or tapering, as they extend from the pier or support, substantially as specified.

Also, in the arrangement of the struts, suspension-rods, and clamp-posts; so that each suspension-rod shall extend from the top of the column or post C, over the pier or support, to the foot of one of the clamp-posts F, while each oblique strut shall extend from the foot of the post C, over the pier, to the head of each clamp-post, as described and shown.

Also, in the mode of construction of the tapering tubular struts of bridges, of not less than two concentric sheets, layers, or thicknesses of metal, the sheets of each layer abutting, and those of one layer breaking joints with the next, substantially as described.

No. 11,323.—J. A. H. Ellis and Alex. Gordon.—*Improvement in Excavating Machines.*—Patented July 18, 1854.

This improvement and claim consist in the mode of operating the excavating machine by placing it within the circuit of an endless chain, which passes over a pulley anchored at one point, and over or around a capstan at another point, so that the machine shall form a part of the endless chain, and be operated, forward and backward, by it.

Also, in attaching one or both ends of the chain to a drum or shaft connected with the machine, so that the slack of the chain may be taken up on said drum or pulley-shaft, to cause the machine to move steadily, without sudden strain, or let out the chain, when it becomes necessary to draw it out of its direct line, for guiding the machine in any desired direction, substantially as described.

No. 11.324.—Jacob Erdle.—*Improved Wind-Mill.*—Patented July 18, 1854.

The nature of this invention consists in so constructing a wheel that it shall be covered with fans or wings, which may be opened or closed by means of the pulley D that operates the square piston G passing through the hollow shaft B fitted into the hub A. To the piston G is attached, at its outer end, a pulley M, which serves to open or close the wings by means of the studs P and S, the pin V, the links O and N, the pulleys I, slide H, lever E, and regulator L. The drawings, sufficiently clear, show the construction.

Claim.—The manner of filling the whole wheel with fans or wings, and the mode of regulating their action, and starting or stopping the wheel through the centre of the main shaft.

No. 11,325.—Roswell Enos.—*Improvement in the Process of Tanning Leather for Soles.*—Patented July 18, 1854.

The improvement and claim consist in commencing the tanning operation upon the sides by the use of a salted infusion of sumac, and then completing said tanning operation by the repeated use of the strong oak or hemlock bark liquor, substantially as set forth. It is stated that solid sole-leather may be produced by this process in an unusually short time.

No. 11,326.—George W. Griswold.—*Process for Preparing and Separating Impalpable Powder for Paint.*—Patented July 18, 1854.

A current of dry or heated air is made to pass through a series of chambers A E E', superposed over each other, the lowest of which is provided with a hopper H to feed in the paint powders, and with a revolving chamber C, upon which said powder falls. The finer particles of the paint are carried up higher and higher, and the coarser fall to the ground. The current must be gentle, and nothing of the kind of a blast.

Claim.—The process of separating and collecting impalpable from coarser substances, such as ground coal, for the purposes of paint or other mineral substances, by means substantially such as herein described and represented.

No. 11,327.—Felix Huston.—*Improved Mode of Raising Vessels.*—Patented July 18, 1854.

This improvement consists in the application and use of floats, and chains passing under the vessel and attached to the floats, in such a manner that the vessel is raised by the careening of the floats; such careening of the floats being effected by means of weights and levers, as described and shown, or other equivalent means.

Claim.—The raising of sunken vessels by means of the careening motion of the side or auxiliary vessels, whether such careening motion is procured by weights run across the decks from side to side of said vessels, or aided by arms projecting beyond said sides, substantially as described.

No. 11,328.—William Russell Palmer.—*Improvement in Horse-Power.*—Patented July 18, 1854.

I claim the combination of the rib or projection upon the arms *a* with the bent pin or iron *e*, or their equivalents A B, constructed and arranged substantially as described, for the purpose of giving a short bend to the rope or band, and thereby preventing the slipping thereof, as herein set forth.

No. 11,329.—J. Augustus Roth and Joseph Lea.—*Improvement in Apparatus for Washing Fabrics in Continuous Sheets.*—Patented July 18, 1854; in England February 7, 1854.

This invention consists in an arrangement of rollers and revolving dashers in combination with a vat, whereby several continuous layers of cloth can be simultaneously washed.

Claim.—The combination of the distributing rollers a a^1 a^2, &c., b b^1 b^2, &c., and the dasher-wheels c c^1 c^2, &c., with the vat, in the manner and for the purpose described.

No. 11,330.—Ebenezer Murdock.—*Improvement in Cutting Tobacco.*—Patented July 18, 1854.

This method of cutting tobacco consists of first separating and cutting the stems, and then packing the product, in intermediate layers with the thinner portion of the leaves, into the cutting box, and pressing it to facilitate the cutting by overcoming the obstacles heretofore presented by the gummy matter in the leaves.

Claim.—The process of manufacturing cut tobacco, by mixing with the leaves, as stripped of their stems for cutting, the stems previously cut

up to a certain degree of fineness, the object being to facilitate, by the use of said stems, the advantageous cutting of the leaf itself, the mixed mass then to be cut up together to the requisite fineness, and then the stems to be separated from the cut leaf, which is then ready for use.

No illustration.

No. 11,331.—WILLIAM G. W. JAEGER.—*Improved Mode of Manufacturing Lampblack.*—Patented July 18, 1854.

The house in which the matter for the production of the black is burnt is provided with two furnaces A and G, and subdivided into two compartments, which are so arranged, by means of valves and conducting-pipes, that the smoke from either furnace can be conducted through both divisions and around the whole house either way, thus permitting to continue the burning and collecting of black without interruption during any length of time; one furnace being used while the other may be cleaned and repaired.

The valve-chimneys F, L, N, O, are to be constructed so as to open some distance below the roof, as seen at D J, figure 3, by means whereof the lightest and best black is preserved and only the heaviest escapes.

Claims.—1st. The division of the house lengthwise, with the aperture B, figure 2, and the connection of the two houses by the chambers marked H and C, figure 1, by which the smoke can be carried around the whole length of the house and returned, rendering a superior quality and greater quantity of lampblack.

2d. The use of the two furnaces, the waste-chimneys constructed and arranged for the purposes as described.

No. 11,332.—JAMES SPRATT.—*Improvements in the Hermetical Sealing of Preserve Canisters.*—Patented July 18, 1854.

The screw-stopper *b* is formed in the shape of a cap. Between said stopper and the edge of the neck of the canister *d*, temporary gasket *c* is placed, which excludes the air until the canister is cooled down, when wax, or any equivalent thereof, is applied into the rim of the outer juncture *e* for the permanent closing of the canister, by means of which the insecurity of the gasket *c* is remedied, and the necessity of metallic solder superseded, and thus hermetical sealing rendered practicable in every household.

Claim—Is to the screw-cap and neck, substantially as described, provided with a gasket of gum-elastic, or like substance, at the inner junction, when this is combined with a trough for containing cement around their outer junction, for the hermetical sealing or closing of preserve canisters.

No. 11,333.—THOMAS STUBBLEFIELD.—*Improvement in Steam-Gauges.*—Patented July 18, 1854.

Claim.—Having thus described my improved steam-gauge, what I claim therein as my invention, and desire to secure by letters patent,

is the combination of the hollow cylindrical box A, perforated at both ends with a hollow cylinder of India rubber E, open at one end, and performing the duty of manometer-spring, as herein described, and also separating the perforations in the opposite ends of the box; the several parts being constructed and arranged, and the case connected with the boiler, and the India rubber with the index, as herein set forth.

Figure 1 is a section of box A, which is also shown in figure 2 on a smaller scale.

No. 11,334.—H. C. STEVENSON.—*Improvement in Washing Machines.*—Patented July 18, 1854.

I claim as my invention, and desire to secure by letters patent, the arms E C, and the strings I, in combination with the rubber F and plate G, constructed and arranged substantially in the manner and for the purpose described.

No. 11,335.—JACOB SENNEFF.—*Improvement in Weavers' Heddles.*—Patented July 18, 1854.

The nature of this invention consists in fastening the wires of the heddle together to form the eye, by means of metallic clasps secured around and between them, in order to form a substitute for the knots heretofore made in connecting them, and to cause the heddles to occupy less space, &c.

Claim.—Forming the eye of the heddle, by casting or otherwise securing around and between the strands composing the same, metallic clasps C, in lieu of the cumbersome knots heretofore employed, curved on their sides, and made concave and smooth on their ends, between the strands or threads, where they form the ends of the eyes, in the manner set forth.

No. 11,336.—WILLIAM W. SMITH.—*Improvement in Buckles.*—Patented July 18, 1854.

See figure. A represents the band of the buckle, which is round and made of metal, with the exception of the space from 1 to 2, which is flattened to make a bed for the leather. B is the hook or tongue, which is cast solid or stationary with the band.

Claim.—The stationary hook or tongue attached to the body of the buckle, substantially as described.

No. 11,337.—ABRAM SNYDER.—*Improvement in Railroad Car Trucks.*—Patented July 18, 1854.

The nature of this improvement consists in the application to a six-wheeled car, having a jointed or flexible truck-frame for turning curves, &c., of waved swivel or coupling-plates, so adapted to each other as to be slightly separated on turning upon each other, and thereby tending,

through the force of a spring, to preserve the wheels in, or restore them to, a direct line.

Claim.—Making the bearing surfaces of the disks on which the load swivels and is supported of an undulating form, substantially as described.

No. 11,338.—GEORGE H. SMITH.—*Improvement in Manufacturing Steel Directly from the Ore.*—Patented July 18, 1854.

The claim is to the process of converting the iron ores known as the oxides and corbonates directly into steel, by subjecting the ore, in the comminuted state, with carbon, and with or without other flux, in a close oven, retort, or other vessel, to a high degree of heat, and then separating the metallic particles from the impurities, and either melting them in crucibles to produce cast-steel, or welding and bolling them in a re-heating furnace, and subjecting the mass to pressure by rolling or hammering to produce spring-steel. No illustration.

No. 11,339.—PETER SPILMAN.—*Apparatus for Describing the Curve of the Arm-Holes of Coats.*—Patented July 18, 1854.

This invention consists in a peculiar arrangement of the scales Nos. 1, 2, 3, 4, 5, forming an apparatus by which, when the location of the arm-hole is obtained, the proper curve is correctly given. It will be noticed that four only of these scales are placed radially, since the arm-hole is not of a uniform curve, varying in size merely; but the curve itself changes for different sized persons, and the position given to the scale No. 1, in combination with the other four, is designed to meet this requirement.

Claim.—The apparatus, consisting of the diagram in the drawings, constructed and operating in the manner and for the purpose described in the specification.

No. 11,340.—JOHN F. SNYDER.—*Improvements in Metallic Fire-Places.* Patented July 18, 1854.

For convenience in winding up the metallic screen, the strips or sections are constructed in a concavo-convex form, and occupy but a limited space in the upper part of the fire-place.

Claim.—The forming of the screen with metallic strips having a concave surface, connected by links, making them flexible, and easily coiled into a small space on a cylinder.

No. 11,341.—SEYMOUR TOMLINSON.—*Machine for Holding Docks of Horses.*—Patented July 18, 1854.

This instrument consists of an iron crupper, connected with a hip or back pad by spiral springs F, and a looped arm B, connected by joints C to the crupper, and raised more or less by strap L and spiral spring

E, together with a suspensory apron D, attached at either side of the curved arm by screw-nuts, and having cushions H and perforations I. The cushions support the dock of the horse, coming in contact with it only at the sides and near the border of the hair, whilst the skin, which was wounded by the knife in pricking, is not irritated by the instrument. The holes admit air to the wounds, and also the discharge of blood or pus.

Claim.—The cushions only.

No. 11,342.—PHILOS B. TYLER.—*Improvement in the Reeling Apparatus of Rope Machines.*—Patented July 18, 1854.

This invention consists in connecting with the bobbin of a spinning-frame, or the reel of a rope-layer, a variable friction, to be operated by the tension of the cord which is being wound, so as to regulate the winding with an even strain throughout; and adjusting the same by means of a spring, so as to wind the cord regularly, with more or less tension upon it.

Also, in so arranging a dog, or finger, for driving the reel, as to allow it to move freely on the spindle in its lateral motion, in combination with a guide which acts upon the rope as it is coiled, to move the reel laterally, so as to wind the rope regularly from end to end of the reel, the rope, as it is wound, forming a regular wedge for the purpose.

Claim.—The combination of the friction-brake and the sliding-belt, or its equivalent.

Also, driving the reel by its outer periphery by the employment of the finger *k*, in combination with the guide *t*, for causing the reel to traverse, the reduction of friction caused by the mode of driving enabling the guide to cause the reel to traverse without too much resistance.

No. 11,343.—CHARLES WATT and HUGH BURGESS.—*Improvements in Pulping and Disintegrating Vegetable Substances.*—Patented July 18, 1854; in England, August 10, 1853.

The wood is reduced to shavings, (the finer the better,) boiled in a solution of caustic alkali, (time and strength to suit the wood,) washed and pressed, and exposed to the action of chlorine, or any composition of chlorine and oxygen, either gaseous or aqueous; washed and pressed again, using occasionally mechanical aid; and then placed in a weak solution of caustic alkali, when it it will assume the form of a brown pulp. The latter is freed from alkali by washing, and then bleached in the usual way.

Claim—Is restricted to the pulping and disintegrating of shavings of wood, and other similar vegetable matter for making paper, by treating them with caustic alkali, chlorine, simple or its compound, with oxygen and alkali, in the order substantially as described.

No. 11,344.—G. F. WILSON and J. M. WHITING.—*Improvement in Screw-Cutting Machines.*—Patented July 18, 1854.

The improvement consists: 1st. In arranging the cutters *a a* upon the periphery of a disk E, and bringing them up to the blanks by a continuous motion.

2d. The peculiar manner in which the chases *a a* are made and secured to the cutter head F, they being let into grooves or recesses in the head, and having their upper portions hinged to their lower portions, which latter are secured to the head by screws or otherwise.

No. 11,345.—MARY BURNS, administratrix of ROBERT BURNS, Jr., deceased.—*Improved Carriage Springs.*—Patented July 18, 1854; in England, June 7, 1853.

This invention consists in combining two or more India-rubber cylindrical compressing springs *k k* with a bar-spring or toggle-bar *a a*, capable of being lengthened or shortened by the screw-nuts *c c*, so as to sustain the required weight with a proper degree of elasticity.

No. 11,346.—GEORGE J. WARDWELL, assignor to HIMSELF and ELMER TOWNSEND.—*Improvement in Boot and Shoe Pegging Machines.*—Patented July 18, 1854.

This improvement pertains to that description of boot and shoe pegging machines which is grasped in the left hand, and, being applied to the work, is operated by a blow from a mallet in the right, and consists:

1st. In so arranging a guide-point F between the respective orifices for the awl D and the driver E, that by placing it successively in the holes as they are made, the driver will be over that preceding, and the awl at the proper distance for another hole.

2d. In the use of a depressor R, attached to the handle by an adjustable screw T, and operated by a spring S, which is operated by the thumb of the hand grasping the handle, and for purposes set forth in the claim.

3d. In the use of the spring-bottom M to the peg-wood carrier H.

Claims.—The combination and arrangement of the guide or setting point F with the handle, the awl or hole-punch, the peg driving orifice, and mechanism, substantially as specified. Also, the combination and arrangement of the spring gauge-lever or depressor R, and the screw T, with the handle and peg-wood carrier, the object of the same being not only to gauge the space in the peg-wood carrier, so as to adapt it to peg-wood of any desirable width below the maximum that can be used therein, but also to enable a person to move the peg-wood downwards, and back of and below the edge of the knife when necessary, so that it may not be moved forwards under circumstances as hereinbefore stated. Also, so combining the spring M with the peg-wood carrier, peg-driver, and gauge-lever, that it shall not only serve to support the peg-wood, or constitute a bottom to the carrier, but also to force up the peg wood after it has been depressed, either by the peg-driver or the gauge-lever, as specified.

No. 11,347.—Albert H. Tingley.—*Improvement in Machinery for Sawing Stone.*—Patented July 18, 1854.

This improvement pertains to a stone-sawing machine, for which a patent was granted to the same inventor March 19, 1850, and consists:

1st. In an arrangement of ratchet-wheels, pawls, &c., for giving the gang of saws a slow intermitting descent; and

2d. In an arrangement for the purpose of regulating the distribution of the water; the latter of which is sufficiently described in the claim.

To effect the former result, the arm *p*, which obtains a reciprocating motion from the driving-wheel, actuates a pawl *o* resting upon the loose ratchet-wheel *l*, of course advancing it a tooth at every stroke. Upon the face of the wheel *l* is a pin *m*, which in its revolution alternately impinges upon the pawls *e* and *f*, connected by a bolted rod *g*, by means of which their relative position is adjusted, so that while the head of one pawl (as *f* in the drawing) is bearing against the radial side of one of the teeth upon the wheel *d*, the head of the other (as *e*) will be resting upon the middle of the rising side of another tooth. This wheel *d* is fast to the axis of the sprocket-wheel U, and thus being released half a tooth at a time, it slowly permits the endless chain T, around said sprocket-wheel, to move and let the saw-frame down.

Claims.—The combination of the two spring-pawls, their slotted connecting-rod, the movable ratchet and its tripping pin, with the fixed ratchet of the shaft of the sprocket-wheel U, the whole being operated and made to operate together as described.

Also, the series of hooked pins on the water distributor, in combination with the series of notches applied to the connecting-rod for operating the water-distributor; the whole being for the purpose of regulating the motion to take place over either a portion or the whole entire surface of the stone, as occasion may require.

No. 11,348.—Solomon Andrews.—*Improvement in Labels for Mail-Bags and other Uses.*—Patented July 25, 1854.

The nature of this invention consists in the formation of a label by joining together two pieces of raised metal, or other suitable material, having the superscription on the convex sides, and open at both ends so as to admit a strap or chain to pass through it, and capable of being reversed.

Claim.—A label formed of two distinct parts and riveted or firmly secured together, having the superscriptions on the outside, and open at both ends to admit a chain or strap to pass through it; for the purpose of being changed from side to side, that the proper superscription may appear, according to the destination of the mail to which it is attached, substantially as specified.

No. 11,349.—Thomas R. and George Bailey.—*Improved Device in Machines for Cutting Round Tenons.*—Patented July 25, 1851.

Motion is communicated to the cutter F and the chuck D E, by means of a belt passing around the pulley C. The end of the rail g

is then shoved into the aperture in the outer plate E. The cutter F cuts a round tenon, that enters the bore of the tube or barrel of the cutter; and the cutter G cuts off the wood on the outer side of the tenon, about half way between its outer and lower ends, leaving a recess in the end of the rail. The rim C serves as a guide to the rail, and crosses the tenon to be cut precisely in its centre.

Claim.—The arrangement of the tube *c*, exterior to and concentric with the tube F, so that the rail may be steadied during the operation of the machine, and the tenon so cut that its axis shall be coincident with the axis of the rail.

No. 11,350.—HORATIO N. and JEREMIAH C. BILL.—*Improved Method of Securing Helves in Axes, &c.*—Patented July 25, 1854.

The drawing presents a perspective view of an axe and helve constructed upon the improved mode—a portion of the metal being removed to show more clearly the construction.

Claim.—The peculiar shape of the eye of the axe B, in combination with the helve C and wedge E.

No. 11,351.—WILLIAM BRADLEY.—*Improvement in Nutmeg Graters.*—Patented July 25, 1854.

Claim.—What I claim as my invention, is the combination of the box or holder C, and its pressure-spring G, with the rasping surface of the grater A, when the whole are applied and made to operate together essentially as above described.

No. 11,352.—EDWARD W. BROWN.—*Improvement in Looms.*—Patented July 25, 1854.

The nature of this invention consists in a peculiar construction of the parts employed to give motion to the drop-boxes of looms for weaving checks or plaids. The patentee disclaims the employment of two ratchet-wheels upon the same shaft, with teeth in reverse direction, and independent pawls driven by independent machinery.

Claim.—The combination of a single pattern-chain O and the double-acting pawls S S^1, constructed and arranged as set forth, with the two ratchet-wheels *a b* upon the cam-shaft F, for the purpose of driving the latter in either direction, as may be required; also the combination of the ratchet-wheels *a* and *b* upon the cam-shaft F, the gearing H I M, and the cam K, arranged as described.

No. 11,353.—REINHOLD BOEKLEN and HENRY T. BROWN.—*Improvement in Bottles.*—Patented July 25, 1854.

The invention and claim consist in constructing bottles with an oblique stopper-passage B, extending downwards from the mouth *a*, and arranged in relation to said mouth and the neck A of the bottle in such a way, that while the lateral pressure on the cork is preserved,

the cork passage in no way interferes with or obstructs the straight communication through the mouth and neck *a* A of the bottle into the interior thereof. This improvement refers to an improvement in constructing bottles for corking, patented to William Clark, as recorded below under No. 11,357, and which is disclaimed.

No. 11,354.—Lewis W. Carpenter.—*Improvements in Section Globe Lanterns.*—Patented July 25, 1854.

For instantaneously detaching the oil-pot from a lantern, the levers J J, being pressed upon at Q, withdraw the studs M M from their apertures. A spring L keeps the whole arrangement fast when the parts are in combination.

Claim.—I claim the combination of the spring L with the levers J J, having the pins or studs M M, which work through the holes N N with a slot or groove, constructed and arranged in the manner and for the purposes set forth.

No. 11,355.—Lewis S. Chichester.—*Improvement in Cotton-Gins.*—Patented July 25, 1854.

This invention is mainly intended for ginning sea-island and other long staple cotton, but is equally applicable to other cotton. In the accompanying drawing, *a* represents the frame, and *b b* two vibrating plates having arms *d d d d*, those of the two at each end being connected by rods *e e*, with a vertical slide *f*, working in ways and provided at the lower end with a pin *g*, fitted to a groove *h*, in a wheel *i*, on a shaft *j*, receiving motion from a driving-shaft *k*, by which means a rotary reciprocating motion is imparted to the two plates. As the plates are vibrated back, two rollers *l l* are made to approach each other near enough to catch the pods and draw them through. These rollers may be covered with India rubber or other elastic substances, to prevent injury to the fibre.

Claim.—The mode of operation of the vibrating curved surfaces, for the purpose of forcing seeds out of the pods of cotton; also, in combination, making the said vibrating curved surfaces with recess 2, to form what is termed the upper griping edges, to act upon the pods near the seeds towards the end of the operation; also, in combination with the vibrating curved surfaces, the employment of rollers acting intermittingly as described.

No. 11,356.—Thomas F. Chapin.—*Improvement in Ploughs.*—Patented July 25, 1854.

In this plough the beam vibrates vertically upon the horizontal pin *a*, by means of a rock E and lever G, which are moved by a crank and the pinion F. These devices serve to elevate or depress the forward end of the beam, and thus to give the plough a greater or less tendency to enter the ground. Applicant disclaims the use of an adjustable beam and rack and pinion, separately.

Claim.—1st. Attaching the beam C to the mould-board A by a pivot *a*, for the purpose of allowing the outer end of said beam to be raised or depressed, as desired, and thereby give the share a greater tendency to enter the earth, and causing the furrows to be of the desired depth. 2d. The means herein shown and described for operating the beam C, viz: The box or socket D, having within it a rack E and pinion F, the rack being connected to the beam by a rod G, the above parts being constructed and arranged substantially as set forth.

No. 11,357.—WILLIAM CLARK.—*Improvement in Bottles.*—Patented July 25, 1854.

The invention and claim consist in forming bottles with an eye B, at the top of the neck *a*, said eye having a passage a^1 through it at right-angles, or nearly so, with the opening *b* of the bottle, for the purpose of receiving the cork *c*, and preventing the latter from being expelled by the pressure of the gases generated inside the bottle.

No. 11,358.—JNO. CLARKE.—*Improved Door-Spring.*—Patented July 25, 1854.

The invention consists in the use of a secondary spring *k*, to close the door when it has been brought partially to by another spring.

Claim.—The arrangement of the several parts, (on the casings and on the door,) as set forth, when the whole is constructed and made to produce the result substantially in the manner herein described.

No. 11,359.—GEORGE A. COLEHAMER.—*Substitute for Sperm or other Oils, for lubricating purposes.*—Patented July 25, 1854.

The invention and claim consist in the following definite proportion of ingredients, to produce by simple mixture, forthwith, a lubricating compound, viz:

For a gallon compound, $\frac{9}{16}$ths linseed oil, $\frac{7}{16}$ths rosin oil, and 12 pennyweights of gum-camphor.

No. 11,360.—THOMAS COLES.—*Omnibus-Step Protector.*—Patented July 25, 1854.

This invention consists in providing and attaching to the doors of omnibuses a covering for the steps and springs, so that when the door is shut, said cover will protect the steps and springs from wet and dust; also, prevent persons from riding thereon.

Claim.—1st. Constructing an appliance or covering for the steps of the omnibus, in form and manner described in the specification, (made of wood, sheet-iron, copper, or other material,) corresponding in width with the door; and the sides falling over the ends of the steps, secured to and moving with the door. 2d. To complete and carry out the design of the invention, forming metallic triangular plates, to be well secured

to spring-bar, or otherwise shielding the ends of the hind-spring; according to the specification and drawings, the whole combined affording the desired relief to stage-men.

No. 11,361.—CHARLES H. DANA.—*Improvement in Cultivator.*—Patented July 25, 1854.

The drawing and claim fully describe this invention.

Claim.—What I claim as my invention, and desire to secure by letters patent, is, constructing each of the outermost teeth G with a horizontal blade projecting more or less outwardly from its shank, and with an upright portion G, bent up at the extremity of said outwardly projecting blade, the edge of said upright portion being parallel, or thereabouts, with the longitudinal direction of the cultivator, for the purpose of cutting up the weeds close to the rows of corn or other plants, and at the same time drawing the weeds away from the rows, and also serving to guide the attendant in directing the cultivator, so as not to injure the plants by too near an approach to them, substantially as herein described.

No. 11,362.—GEORGE DEUBLE.—*Improvement in the Striking Part of Eight-day Steeple-Clocks.*—Patented July 25, 1854.

Claim.—What I claim as my invention and desire to secure by letters patent is, attaching to the beam or lever M, which is operated by a pin on the wheel O, and is provided with a detent for arresting the fly, the knee N, or its equivalent, to act in conjunction with the pins in the count-wheel H, as an inclined plane, to raise the lever till its detents take effect, and to escape from the pins when the lever is still further raised by the pin on the wheel O, as herein described.

No. 11,363.—CHARLES W. DICKINSON.—*Improvement in Machines for Making Metallic Rings.*—Patented July 25, 1854.

The claim allowed is to forming the lower finishing die $s\ s^1$ in two parts, of which the part s^1 is capable of being raised to expel the finished ring or link.

No. 11,364.—L. A. DOLE.—*Improved Arrangement for Lathe Chuck.*—Patented July 25, 1854.

Figure 1 is a vertical longitudinal section of the machine, a section of a hub being shown secured in the same, and partly bored.

Figure 2 is an inverted plan of the improvement. The inventor's claim is to the manner of combining and arranging the scroll-screw A, holding jaws B, screw or mandrel C, cutter C^1, adjusted nut F, gauge-plate G, sliding-catches *c d*, and notched and grooved barrel E, or their equivalents; for the purpose of constituting a machine which is capable of boring the hub entirely through in a true and perfect man-

ner, and also of being adjusted so as to cut a shoulder of the required depth, to enter the hub at the proper distance, and then being adjusted as the operation is proceeded with, in order to square up the shoulder in a perfect manner.

No. 11,365.—JAMES and JOHN FISHWICK.—*Improved Mode of Driving and Straining Saws.*—Patented July 25, 1854.

Disclaiming the direct connexion of the saw with the piston-rod, and straining the saw by steam, or other elastic fluid, the inventors

Claim—Driving and straining the saw by two steam-cylinders and pistons of unequal size—the larger being of sufficient size to drive the saw during its downward or cutting movement, and only receiving steam during such movement; and the smaller, which always contains steam, being of sufficient size to keep the saw strained while cutting, and to raise it and the larger piston.

No. 11,366.—CHARLES FOLSOM.—*Improvement in Library-Tables.*—Patented July 25, 1854.

This is constructed so that when the leaves E F, and the centre-piece D, to which they are hinged, are dropped horizontally upon the table B, it may then be used as an ordinary table for reading, or for other purposes. If one of the leaves, E or F, be raised into a vertical position, the other remaining horizontal, it may be used for writing or copying—the vertical leaf supporting the sheet to be copied.

What I claim as my invention and desire to secure by letters patent is, the combination of the table B with the leaves C E and F, constructed and operating in the manner substantially as herein set forth.

No. 11,267.—ALANSON GALE.—*Improvements in the Mowing Machine.*—Patented July 25, 1854.

The improvement consists in constructing the machine with an additional wheel A, for the purpose of supporting the weight of the cutter-bar and cutters without dragging them on the stubble. To effect this, said wheel A is placed at a point somewhere in advance of the centre of gravity of the whole machine, including the driver sitting erect on his seat, whereby the cutter-bar is lifted above ground whenever the machine is at rest or pushed back, or whenever the driver leans back in his seat, but keeps close to the ground all the time the machine is in motion, the draught of the team restoring the equilibrium.

Claim.—The claim is confined to the wheel A as above described, so constructed and combined with the frame of a mowing machine as to support the cutter-bar clear of the ground when pushed back, and lower it to its place when drawn forward

No. 11,368.—DANIEL GARDINER, JR.—*Improvements in Quartz and Ore Crushers.*—Patented July 25, 1854.

The stampers F, being raised and let fall by the operation of the cam-finger *b*, are caused to rotate rapidly in the basin and in contact with the substance under treatment.

Claim.—The employment of one or more stampers having such a jumping motion as to leave them for some time in contact with the quartz or ore after every descent, and such a rotary motion, that while they remain in contact with it between one descent and their next ascent, their rotary action will be sufficient to pulverize to a proper degree that which was prepared by the breaking or crushing action of their descent, substantially as herein described.

No. 11,369.—ABRAM J. GIBSON.—*Improvement in Vehicles.*—Patented July 25, 1854.

This invention consists in placing the foremost pair of wheels forward of the point of attachment to the perch by means of a bent axle *b*, in combination with arch springs *r r*, *s s*, *p p*, connecting and bearing from axle to axle, thus enabling the vehicle to be made shorter and to turn in less space.

Claim.—To give the forward axle a bent-form, in combination with arch-springs connected and bearing from axle to axle, for the purpose and in the manner and form substantially as set forth.

No. 11,370.—EZEKIEL GORE.—*Improvement in Butter-Workers.*—Patented July 25, 1854.

The nature of this invention consists in the employment of an endless revolving sack E for containing and confining the butter, and conveying it to and between the fluted or working rollers C and D, and through the water in the tub or box, as fast as the rollers operate upon it, until it is thoroughly worked, washed, and seasoned.

Claim.—A machine provided with an endless revolving sack, and having its parts arranged and operating essentially as herein described and shown, for working, cleansing, and seasoning butter, substantially as set forth.

No. 11,371.—GEORGE W. GRISWOLD.—*Improvements in Portable Grates.* Patented July 25, 1854.

The shakers E extend from the front of the grate, where they are hinged, one for penetrating each pair of bars, to the rear part of the fire-box; a vibrating motion communicated to the shaker detaches clinker, and shakes down the ashes and refuse coal.

Claim.—The hinging of the shakers in front of the grate so as to give the ends thereof next the back the greatest extent of motion, and this in combination with the stop, which prevents the shakers from rising above the bottom of the grate, substantially as described.

No. 11,372.—Edmund P. Gaines.—*Improvements in Dressing Mill-Stones.*—Patented July 25, 1854.

Claim.—The manner of laying off the dress of the mill-stones, with four curved master-furrows I I I I, (by which I gain a draught equal to one-fourth the circumference,) in connexion with secondary furrows, laid according to the directions before given, for the purpose of more effectually grinding grain, increasing the quantity ground with a given power, producing a better yield of superfine flour, and avoiding both the choking and undue heating of the stones, in the manner substantially as set forth.

No. 11,373.—Benajah T. Hall.—*Improved Water-Wheel.*—Patented June 25, 1854.

Claim.—The combination of the bevelled or inclined curb A with the wheel, constructed as described, and the eccentric discharging orifice, or its equivalent, for the purposes above set forth.

No. 11,374.—A. C. Harig and D. C. Stoy.—*Improved Lock.*—Patented July 25, 1854.

Claim.—1st. To the self-adjusting guard *l*, arranged and operating in the "usher" C, in such a manner that the introduction of powder or picking instruments into the lock through the key-hole is effectually prevented. 2d. The arrangement and combination of the cam E which operates the bolt, the dog G, and the eccentric notch *i* in the usher, in such a manner that while the key or its substitute may be operating on the tumblers, the cam shall be intercepted by the dog, so that it cannot be brought into contact with the bolt till the key shall have moved the tumblers as far as it is capable of.

No. 11,375.—Mark A. Heath.—*Improvement in Windows.*—Patented July 25, 1854.

This improvement consists in the insertion of a flexible expanding strip *b*, formed in lengths, jointed or otherwise pliantly secured together so that the sash is made to slide smoothly in the frame, the several lengths of the strips expanding and contracting to accommodate themselves to inequalities in the grooves in which they slide; all for the purpose of forming a close joint between the sash and the frame, substantially as shown and described.

No. 11,376.—Walter Hunt.—*Improvement in Shirt Collars.*—Patented July 25, 1854.

This invention consists in making collars of a fabric composed of both paper and cloth, and in subsequently polishing the same by enamelling or burnishing; also, in covering the collars with a thin pellicle of transparent colorless varnish, to render them proof against injury from

humidity, and when soiled may be wiped off with a damp cloth or sponge.

Claim.—As a new article of manufacture, the above-described shirt collar, made of the fabric set forth, and polished and varnished as specified.

No illustration.

No. 11,377.—HENRY JACKSON.—*Improvements in Steam-Boilers.*—Patented July 25, 1854.

Claim.—1st. The arrangement of the vertical water-tubes *i i i* and spiral flues, in relation to the furnace, as shown.

2d. The arrangement of the vertical water-tubes, surrounded by the non-conducting material, and the upper and lower horizontal tubes *a a a*, in connexion with the heating surfaces, for the purpose of returning the water from the upper to the lower tubes.

No. 11,378.—WILLIAM G. LAVERS.—*Improved Device for securing ends of Wires in Fence-Posts.*—Patented July 25, 1854.

The nature of this invention consists in the peculiar manner of securing the horizontal and parallel wires B to the posts A, which is, by passing the ends of the wires through slots *d* in the posts, and forming hooks at the ends, and the ends of these hooks passing through slots immediately below those first mentioned; the wires being straightened and strained by means of the nuts and screws, as seen at D, and straining-posts being placed at each corner of the lot or field to be enclosed.

Claim.—The claim of the patentee is to the method of securing the horizontal wires to the posts. Figure 3 is a front-view of the fence. Figure 1 is a side-view of one of the posts, showing the manner in which the wires are secured in the posts. Figure 2 is also a side-view, showing the manner of crossing the hooks at the ends of the wires.

No. 11,379.—GRIFFITH LICHTENTHALER.—*Improvement in Cultivator.*—Patented July 25, 1854.

This invention consists in the method of attaching shares I to beams, and is sufficiently described by the claim.

Claim.—Having metal strips F, perforated with holes *f*, secured to the under-side of the beam A; and sockets, formed of two lips *g g*, made at the upper ends of the shares, and perforated with holes *h h*, in which holes *h*, and in the holes *f* in the plates E, wooden pins *i j* are passed, securing the shares to the beams, as set forth.

No. 11,380.—HYMEN L. LIPMAN.—*Improvement in Eyelet Machines.*—Patented July 25, 1854.

The nature of this invention consists in forming the die and counter-die, or follower and anvil-block, so that an eyelet subjected to their

action shall be equally turned over, or riveted at both sides or ends, by a single operation, without turning over the folios or whatever is to be fastened thereby.

Claim.—The so forming of the die and counter-die, or follower and anvil-block, of an eyelet machine, by concave grooves, channels, or their equivalents, as that the eyelets may be riveted or clinched on both sides by a single operation and without turning them over, substantially as described.

No. 11,381.—NORMAN B. LIVINGSTON.—*Improved Coupling for Carriages.*—Patented July 25, 1854.

This invention consists in coupling the front axle to the reach by means of an eye-piece or collar having a shank, instead of by a central king-bolt, the shank being attached to said reach E, the collar or eye fitting loosely in a groove formed in the periphery of a horizontal circle-plate, which is secured fast to the top of the front axle, and made in two parts, so as to admit of the ring or eye-piece being fitted in the groove.

Claim.—Coupling the front axle to the reach, and also the whiffletrees of a wagon or carriage to the tongue, by means of the circular collar or eye-piece and grooved sectional circle-plate, constructed and arranged, and operating in the manner, essentially as herein described.

No 11,382.—JOHN LYON.—*Improvement in Ditching Plough.*—Patented July 25, 1854.

This invention and claim consist of a plough, endless apron, guide-pulley, etc., so arranged and constructed, that a furrow of any depth may be cut, and the loose soil taken up and conveyed by the endless apron *a*, and discharged at right-angles with the line of travel; for the purpose of forming roads and foundations for fences, and for other purposes.

No. 11,383.—JORDAN L. MOTT.—*Improved Mode of Securing Staples to Walls.*—Patented July 25, 1854.

This invention consists in forming a cast-iron anchor with the wrought-iron staple attached, so shaped as to be locked in and become an integral part of the mason-work.

Claim.—Forming the anchor of a block cast on to the shank of a wrought-iron staple or eye, and provided with a thin wing, having flanches or ribs, all cast and forming one substance with the block, substantially as specified, whereby the cast-iron part shall hold the shank firmly, and at the same time become an integral part of the mason-work, and be firmly held therein by the superincumbent weight, as described.

No. 11,384.—James R. Nichols.—*Improvements in Portable Soda-Water Fountains.*—Patented July 25, 1854.

The invention and claim consist in the combination of a cylindrical reservoir A, encasing a generator E, with a purifier H, in a peculiarly compact manner; and in the arrangement (above and partly within the generator E, in the way of a sliding-tube of a spy-glass) of a regulator F, provided with valve P, rod G, and screw L, to control the supply of the powdered chalk or soda into the generator, without opening the fountain.

No. 11,385.—Alphonse Quantin.—*Improved Mode of Stopping Mineral-Water Bottles.*—Patented July 25, 1854.

The invention and claim consist in composing the bottle-stopper of a metallic cone *c* c^1, provided with certain canals and grooves, the cork zone, and the India rubber valve G M, intended to enable the consumer of the mineral water to draw off any part thereof without spoiling the remainder in the bottle. Also, to serve permanently to stop the bottle as many times as it may be filled with new liquor.

No. 11,386.—Washburn Race, assignor to H. C. Silsby and W. Race.—*Improvements in Regulating the Heat of Stoves.*—Patented July 25, 1854.

The amount of air admitted to stoves is regulated by opening and closing the damper E, through the intervention of the expanding bar C, the catch D F, and the screws B A.

Claim.—Adjusting the stove-regulator by attaching the nut and screw used for that purpose at the top end of the same, and at the top of the stove, in the manner and for the purposes set forth. And further than this mode of adjustment I do not claim.

No. 11,387.—Elihu Ring.—*Improvement in Machines for Working Butter.*—Patented July 25, 1854.

This invention consists in providing the machine with a block Q, having a spring in its rear side, so as to allow the block to traverse when the butter is forced against it by means of the piston H.

Claim.—Arranging the block Q to traverse as described, in combination with the spring R, or its equivalent, to force it forward, in the operation of working butter, substantially as described.

No. 11,388.—Elnathan Sampson.—*Improvement in Platform Scales.*—Patented July 25, 1854.

The principal part of this invention consists in supporting the platform upon a series of short levers G G, which extend transversely from the side of the platform to near its centre, and are there connected to a laterally vibrating lever E, which extends the whole length of the

platform, and from which the motion is transmitted to the scale-beam through the lever F; so that the use of *trussed levers* in scales, even of the largest size, may be avoided, and consequently the necessity of digging pits, deep in proportion to the size of the scale, wherever one is erected.

It also consists, in a peculiar manner, of connecting the platform with the above-mentioned levers G G, viz: in the use, within the stirrup *i* from which the platform depends, of a double concave auxiliary block *k*, upon the upper concave of which the bearing-edge of the stirrup *i* rests, and the lower concave of which rests upon the knife-edge *s* of the lever G; so that, as the two concaves are at right-angles, the platform is allowed to have a free swinging motion, either longitudinally or transversely.

Claim.—The combination of the short longitudinally vibrating levers G G with the laterally vibrating longitudinal lever E, by which the scales may be constructed of the largest size without using trussed levers.

Also, the combination of the platform with the beam actuating the double lever F, or its equivalent, through the medium of the longitudinally vibrating levers G G and the laterally vibrating lever E.

Also, inserting a double concave intermediate block *k* within the opening of each stirrup *i*, between the sharp edge of the cross-bar of the stirrup and the edge of the lower pivot, at right-angles therewith; for the purpose of enabling the platform to swing freely, in a lateral and longitudinal direction, without injury to said sharp bearing-edges, substantially as set forth.

No. 11,389.—J. Wheeler Smith.—*Improvements in Sheet-Metal Candlesticks.*—Patented July 25, 1854.

Claim.—Forming the base of a sheet-metal candlestick of two sheets of different metals, which are of such proportions, respectively, that the upper sheet is too thin to support the candlestick by itself, and has the requisite stiffness and strength imparted to its central portion by fitting and firmly uniting thereto the under sheet, substantially in the manner herein set forth.

No. 11,390.—Isaac Straub.—*Improvement in Corn-Cob Cutters.*—Patented July 25, 1854.

In this machine the rotary burr E carries a knife *c*, which meets blade *b* with a shear-cut to sever the ears of corn, which are fed in through hopper D, and, after being cut, are ground between the burr E and hollowing cylinder A.

Claim.—The combination of a rotating burr E, provided with a blade or cutting-edge on top, and with a toothed or roughened surface on its perimeter, and a stationary shell, also provided with a cutting-edge; said cutting-edges operating together, shear-fashion, for slicing off and reducing ears of corn preparatory to their undergoing a further

reducing or grinding operation; the whole being combined in the manner and for the purpose substantially as set forth.

No. 11,391.—DAVID STOUDER.—*Improved Ditching-Spade.*—Patented July 25, 1854.

This invention consists in combining an obtuse-angled cutter E, with the side-cutters *c* sloping upwards, with a claw-hook *l*, so that a drain or blind ditch can be cut by the operator standing upon the surface of ground.

Claim.—The combination of the obtuse-angled bottom-cutter with the side-cutters sloping upwards, the light steel ribs, the foot-treads on the single or divided handle, and the claw-hook for deep trenching, in the manner and for the purposes set forth.

No. 11,392.—WILLIAM H. TOWERS.—*Improvement in Horse-Shoes.*—Patented July 25, 1854.

The improvement and claim consist in the combination of steel springs, having corks B formed on their flexible end, and capable of being easily removed and attached with the main body of the shoe.

No. 11,393.—JNO. E. VANSANT.—*Method of ascertaining the Draught of Boats.*—Patented July 25, 1854.

Claim.—The arrangement of tubes and indicators in the bow, stern, and quarters or wings of light-draught vessels, for the purpose of keeping them trimmed, by indicating the true draught throughout their length and breadth, and preventing the hogging or straining of the hull, substantially as described.

No. 11,394.—ABRAHAM VAN ANTWERP.—*Improvement in Paddle-Wheels.*—Patented July 25, 1854.

Claim.—The construction and use upon steamboat paddle-wheels of disconnected floats, of *cyma recta* and *cyma reversa* form, as shown in figure 1; the same being placed upon arms set obliquely on the shaft, being so formed and placed that the end of the float enters and leaves the water on a line parallel with the direction of the vessel, whereby the beating down of the water by the float when entering, and the raising up of the water when leaving, as in the ordinary transverse paddle, is prevented.

No. 11,395.—CHARLES A. WAKEFIELD.—*Improvement in Seed Planter.*—Patented July 25, 1854.

This planter consists of a seed-chamber *a*, having a seed-valve B in its bottom, said valve being (by means of slot *g* and pin *f*) moved by

the plunger A, which, in its descent, carries before it the seed from passage D, and by a lip prevents the seed from escaping from the end of said plunger, as seen at G, whilst the obliquity of the plunger prevents the seed from escaping at the side opposite said lip. The handle E is placed oblique, to facilitate the oblique working of the plunger. The seed is thus closely imbedded in the soil, and the oblique hole is readily closed by the falling earth as the implement is withdrawn.

No. 11,396.—BENJAMIN WEBB.—*Spring Polishing Wheel.*—Patented July 25, 1854.

Claim.—The forming of an elastic polishing wheel by the use of a series of springs placed under sections of the surface, moving vertically from the centre, and independent of each other.

No. 11,397.—CHARLES WILLIAMS.—*Improved Mode of Fitting Heads in Boxes.*—Patented July 25, 1854.

This improvement consists in putting heads in boxes by cutting grooves across the grain of the boards, and near each end, to receive those boards which are designed for the heads, in a manner similar to that practised for heading barrels. One end of the box is made perfectly secure in the first instance, and the other is put in when the box has been made ready for use. A, in the drawing, is intended to represent the grooves; B the angular end-pieces; C the key, as it might be called, which is put in after the other pieces have been put in their places, and which presses tightly against them, keeping them in place. C is kept in position by a pin that passes in at one end of the box.

Claim.—The angular form of the three pieces of heading, which allows these being put in securely, and often removed, without drawing a nail or moving a hoop.

No. 11,398.—SIMON WILLARD.—*Improvement in Bedsteads.*—Patented July 25, 1854.

Claim.—My improved bedstead, constructed substantially in the manner herein described, viz: of sheet-metal side and end pieces *a b c*, which are bent at their ends so as to form sockets for the reception of the sustaining and uniting posts *e*, and provided with inward flanches *f* at their lower edges for the reception of the hinged bottom-plate *h*, which serves at the same time to support the bed and keep the bedstead firm and in proper shape, substantially as herein set forth.

No. 11,399.—DANIEL WILLIS.—*Improvement in Hot-Air Furnace and Cooking Range.*—Patented July 25, 1854.

An elevated oven is entirely surrounded by ignited gases proceeding from a fire-box constructed of sectional parts, having a grate which can be raised or lowered, the whole arranged in such a manner as to heat

air for warming apartments at the same time that operations in cooking are in progress. The cold air for this latter purpose is made to traverse the entire outer surface of the fire-chamber by the return flue.

Claim.—The arrangement, construction, and united operation of the several devices forming the cooking and warming apparatus herein shown, substantially as, and for the purposes, set forth.

No. 11,400.—LEONARD WOODS.—*Improvement in Hedge Trimmers.*—Patented July 25, 1854.

This machine is so constructed that the travelling wheels not only carry it beside the hedge, but also drive suitable gearing to set in motion the nearly vertical cutter-wheel *k*, and also the horizontal cutters *q*.

The applicant does not claim knives revolving on a horizontal shaft, as used for topping cotton.

Claim.—1st. I claim the arrangement of the cutters affixed on the face of a wheel or an inclined shaft, revolving so as to cut upwards as the carriage advances parallel to the side of the hedge, in the manner and for the purposes as described.

2d. I claim the gauge *s* in combination with the horizontal revolving knives *g*, both being adjustable to the required height for topping the hedge as described.

3d. I claim lifting the lower branches of the hedge to bring them within the range of action of the revolving cutters, by means of the bent bar *m* or its equivalent, thereby obviating the necessity of having the cutter-wheel of large diameter, and allowing the cutters to be carried so high as to be free from all danger of striking the ground, substantially as set forth.

No. 11,401.—DANIEL ZEIGLER.—*Improvement in Cider Mills.*—Patented July 25, 1854.

Claim.—I claim the arrangement, herein shown and described, of the spur-teeth on the rollers in rows around the periphery, of regular sizes in each row, but the teeth in the one row being larger than the teeth in the adjoining row, and the smaller teeth of the lower roller being arranged opposite the larger teeth of the upper rollers, and all three rollers running at different velocities as specified, and constructed and arranged as, and for the purposes, set forth.

No. 11,402.—DANIEL WILSON, assignor to W. F. PRATT, G. W. BOSWORTH, and H. M. BIRD.—*Improvements in Stovepipe Thimbles.*—Patented July 25, 1854.

Claim.—I claim the combination of the rings E F, the thimble B, the sliding-plates C D, and the cover G, with the ventilators H H^1, constructed and operating in the manner substantially as herein set forth.

No. 11,403.—BIRDSILL HOLLY, assignor to SILSBY, RACE, & HOLLY.—*Improved Mortising Machine.*—Patented July 25, 1854.

Claim.—I claim the mode of working the chisel as set forth in the specification, the same consisting in the re-entering belt H or its equivalent in combination with the spring S and hand or foot-strap S^2, and in combination therewith the tongue-strap *t*, with its spring S^1, for the purpose of keeping the belt loose upon the driving-shaft.

I claim, also, the mode of reversing the chisel, or of keeping it in and out of gear, which consists in the combination of the hinged-bar *h*, the spring *i*, the notched ring *v*, the treadle *u*, or its equivalent, and the rod *d*, connected with the gear-wheel *w* on the pulley-frame.

No. 11,404.—THOMAS BROWN.—*Improvement in Cable Stopper.*—Patented July 25, 1854; in England, April 20, 1847.

Claim.—I claim, 1st. The arrangement of the capstan, the removable rollers *e e*, and the sockets *f f f* for said rollers, in such a manner, and having such relation to the hawse-holes, chain-locker, deck-pipes, and under-lifting stoppers, that a chain-cable can be continuously hove in by means of said capstan and rollers, or be directly run out of the lockers without any previous overhauling.

2d. I claim the arrangement of the under-lifting bow-stoppers and after-stoppers E, by which more cable can be gradually and controllably given to a vessel while riding heavily at anchor.

No. 11,405.—ELKAN ADLER.—*Improvement in Machinery for Making Matches.*—Patented August 1, 1854.

Claim.—1st. I claim a perforated dipping-board H, moved by and combined with the sliding-frame I, to receive the matches as they are cut, and to dip a great amount of them at once in the igniting preparation.

2d. I claim the combination of the springs *k l*, levers *m n*, shafts *f g*, pawls *h i*, rods *o p*, and button *j*; whereby the board H, when fitted, can be set to receive a new load of matches, by the simple pressing on button *j*.

3d. I claim the combination of knives F and F^1, with the connecting-piece K, crank J, and lever *q*; whereby, at every revolution of the crank J, a range of matches is cut off, of perfectly equal length, and left fixed in board H.

4th. I claim the combination of grooved-rollers C C^1 with drum B, grooved tables D E G, and knives F F^1; whereby an unfailing supply of wax tapers, or equivalents, is secured for the action of the knives and for the reception in board H, the wax tapers being from the start wound twice around the drum B.

5th. I claim the combination of the driving-wheel *d*, roller-wheels *e* e^1, intermediate wheel *c*, and drum-wheel *b*, to set and to keep in action the various parts of the machinery.

No. 11,406.—WILLIAM LITTLE.—*Lubricating Material.*—Patented August 1, 1854.

Claim.—I claim the combination of the coal-oil, or heavier oily product of the second distillation of bituminous coal, or equivalent, with a saponified vegetable or animal or fish oil or fat, and whether the coal-oil be combined with the vegetable, animal, or fish oil, or fat, after or during the saponification of the latter.

No. 11,407.—CHARLES F. BAUERSFELD.—*Wood-Carving Machine.*—Patented August 1, 1854.

The improvement in this case relates mainly to the form of the tools used in making raised figures upon a board. The frame is similar to that of ordinary drilling-machines. The drawing embraces sixteen figures; of which we present three. Figure 1 shows a bit for forming semi-spherical projections; figure 2, a bit for straight excavations; figure 3, a large under-cutting bit.

Claim.—I claim the formation, as described in the specification, of an excavating bit, having its longitudinal contour corresponding to the designed vertical section of the relievo; and grooved along its sides and across its lower end or face, in the manner described, at or near the plane of its axis, for the purposes explained.

No. 11,408.—COLLINS B. BAKER.—*Improvement in Brick Machines.*—Patented August 1, 1854.

This improvement pertains to that class of brick machines in which the plunger has a segmental shape, and turns upon the centre of said segment, (as fully shown in the drawing,) and consists in a peculiar shape given to the pressing surface, by which it is enabled to give a vertical, and the same degree of, pressure to the clay in the hopper near the outer surface as that given to the clay near its centre of motion, thereby causing the clay to be forced with equal and uniform pressure throughout the whole mass, filling all parts and corners of the mould, and producing brick of uniform density.

Claim.—I do not claim constructing a sector-shaped follower with a rectilinear nor a single curved concave pressing surface; but I do claim constructing it with a pressing surface of two circular or curved concaves which are proportioned to the increase of the distance from the centre of motion K of the quadrant N, substantially as, and in the manner and for the purpose, set forth.

No. 11,409.—RICHARD C. BRISTOL.—*Improvement in Steam-Boiler Tubes.*—Patented August 1, 1854.

The improvement consists in having the water-surface of the tube indented or roughened—the fire-surface being smooth.

Claim.—The cutting, impressing, or otherwise increasing one of the surfaces of tubes, or sheets of metal, which said surface is to form the

radiating side of boilers, flues, or vessels, for the purpose of imparting heat to any liquid, vapor, gas, or to atmospheric air, when said cutting or impressing is of such a character as to admit of being made after the plates are bent up into form, substantially as described.

No. 11,410.—GEORGE W. CHERRY.—*Improvement in Saws or Blades for Sawing Stone.*—Patented August 1, 1854.

The *first* part of this invention consists in grooving the sides of the saw, from the upper to the lower edge of the saw, obliquely, so as to form channels for the sand to pass down to and under the edge of the saw, and in which the broken sand may be borne up and outward as the motion of the saw is reversed. To prevent breaking the sand in its passage, the grooves *b b* are formed obliquely across the saw-plate.

Secondly, the invention consists in the use of fine grooves, depressions, or holes *d d*, made in the saw or blade between the sand-passages, for the purpose of giving uniform flexibility to the blade; and, *thirdly*, in constructing the saw or blade alternately of hard and soft metal, in the direction of its length, hard metal being best to retain the saw in its proper shape, and soft metal best adapted to hold the sand effectually to its work.

Claim.—I claim constructing saws or blades for sawing or cutting stone with inclined side-grooves extending entirely across the body of the saw or blade, for the purpose specified. Also, the use of fine grooves, depressions, or holes made in the saws or blades between the sand-passages, for the purposes specified; also, constructing saws or blades for sawing or cutting stone alternately of hard and soft metal in the direction of their length, substantially in the manner and for the purposes specified.

No. 11,411.—EPHRAIM and JOHN R. CUSHMAN.—*Improved Machine for Drying Thick Paper.*—Patented August 1, 1854.

The nature and operation of this invention will be understood by reference to the claim and accompanying drawings.

Claim.—I claim the process of drying thick paper, and at the same time preventing it from warping out of shape, by placing the sheets *g g* in a pulpy state upon heated tables A or platforms, and allowing them to remain there until they harden to such a degree as to begin to warp out of shape, and then causing open or lattice weights C D to be let down upon them, which rest upon their edges or points at different parts of the sheets, and preserve them in flat positions until dry, substantially as herein set forth.

No. 11,412.—WILLIAM CAYCE.—*Improvement in Door-Locks*—Patented August 1, 1854.

The improvement and claim consist in the arrangement of levers G and pawls E E with the bolt C, the lever being guarded by the tubu-

lar key-hole H projecting inward over them, and the pawls protected by the board-bolt beneath them.

No. 11,413.—JEREMIAH CARHART.—*Punching Apparatus for Uniting Metallic Plates.*—Patented August 1, 1854.

Claim.—1st. I claim making the punch *a* and die *b* of such relative size, that the punch shall be incapable of entering the die.

2d. Making the punch-holder *c* with a concave recess *d* in its face, or otherwise furnishing the back of the punch with a shouldered face, which shall bear upon the metal only in a ring at a distance from the punch.

3d. The employment of an upset plate *k*, placed as described, after the punching operation, between the die and that portion of one plate of metal which is protruded through the other, so that by repeating the movement of the punch, the protruding portion may be upset or riveted. This I claim irrespective of any mechanism that may be employed to carry the upset plate to and from the die.

No. 11,414.—JOHN CARTON and JOSEPH BRIGGS.—*Improved Cover for Hot-Air Furnaces.*—Patented August 1, 1854.

The hollow cone A, affixed to the inner surface of the top of the hot-air chamber, has its apex *c* suspended over the centre of the furnace. The ascending currents of heated air diverge or are radiated by its deflecting surfaces to any corner of the chamber, and to the opening provided for discharging it into the chamber to be heated.

Claim.—We claim the inverted cone or deflector, when placed at the top of the chamber of hot-air furnaces, constructed in the manner and for the purpose set forth.

No. 11,415.—ARI DAVIS.—*Improvement in Magneto-Electric Machines.* Patented August 1, 1854.

This invention consists in so arranging the machine as to make only one conducting spring (*k*) necessary; and instead of making the journal *m* of the shaft *l* metallically continuous with it, it is made of a separate piece of metal, and insulated from the shaft.

Claim.—I claim as my invention the insulation of the journal of the shaft, in combination with the single conducting-spring in electro-magnetic machines, as herein described.

No. 11,416.—HENRY C. DEPUTY.—*Improvement in Draughting and Modelling Vessels.*—Patented August 1, 1854.

Claim.—I claim the application of diagonals to draughting and modelling all kinds of vessels; also, the principle by which the exact concavity of concave water-lines is determined, viz: by transferring the intersections of the water-lines (in the body plan) with each frame to a half-breadth plan, which is seen in the drawing.

No. 11,417.—JOHN J. EFFERENN.—*Improved Machine for Sawing Fire-Wood.*—Patented August 1, 1854.

Claim.—I claim the combination of a saw G and saw-horse A with fly-wheels C, as described in the specification, operating through the agency of a lever E, arm D, and crank B.

No. 11,418.—PHINEAS EMMONS.—*Improved Machine for Working and Moulding Dough for Crackers.*—Patented August 1, 1854.

This machine consists: *first*, in arranging a set of feed-rollers, having semi-circular channels transversely of their axes, and matching together so as to form or cut a cylindrical strip of dough as it passes between them, in combination with a third roller (made like the foregoing) a little lower down than the lower feed-roller, and in front of it, so as to form a continuation of the channel-way for the cylindrical strip of dough, and for cutting the same into short lengths suitable for crackers, by means of a series of cutters placed in its channel-way, and operating on the strip of dough as it is fed through the rollers; *second*, the use and arrangement of a pair of moulding-wheels, having in their inner faces a semicircular concave annular groove, the said wheels being so adjusted on their axes as to form an annular core at the junction of the two semicircular grooves at the front edge of the wheels, and opening obliquely backwards so as to allow the ball of dough, when moulded by the rotary action of the wheels, to fall from the machine—that is, the left-hand wheel having a rapid forward motion, and the opposite wheel a slow backward motion, so as to produce a rolling and twisting of the ball of dough analogous to the manipulations of a workman in moulding dough for butter crackers; *third*, the use of feed and guide boards for conveying and confining the dough in passing through the machine, with suitable devices for propelling it.

Claim.—I claim the use of the roller D, made substantially as set forth, with cutters in its channel, in combination with the feed-rollers C^1 and C^2, for forming and cutting dough into suitable shapes for making crackers, substantially as set forth. Also, I claim as new, for rolling dough into balls, the conical or nearly disk form of the wheels H and J, whereby they are made by their oblique position on their axes to combine a twisting and rolling motion, only having been heretofore employed in cylindrical grooved rollers.

No 11,419.—JOSIAH ELLS.—*Improved Revolving-Breech Pistol.*—Patented August 1, 1854.

This improvement consists in the use of a vibrating stud *p*, in the trigger, in combination with a hammer *m*, with a chamfered or bevelled edge, and with a notch near the extremity of its toe, which is applicable to all kinds of repeating fire-arms, by means of which, by simply pulling the trigger, the hammer *m* is raised to full cock, or fired at pleasure—the stud yielding latterly to allow of the descent of the hammer, and recovering its position on the toe of the hammer, for re-

peated action. Also, in the use of a double spring *t u* to the trigger, for the purpose described, viz: to give a strong spring and considerable play to the trigger. Also, in the mode of locking the rotating breech at the moment of firing. See g^1, cam-shoulder of trigger, pressing up the head o^1 of locking-bolt.

Claim.—1st. I claim the use of a stud *p*, in the trigger, vibrating laterally, in combination with a bevel-edge hammer *m*, with a notch at its toe, by means of which, by simply pulling the trigger, the hammer is raised, and may be either allowed to stand at full cock or fired at pleasure; while the trigger, after firing, will regain its position for repeated action.

2d. I claim the use of a double spring *t u*, or spring and lever, for the purpose hereinbefore set forth.

3d. I claim the mode, hereinbefore described, of locking the rotating breech at the moment of firing by means of the locking-bolt $j\,o^1$, in combination with the cam shoulder g^1 on the trigger, and the hexagonal neck *b* of the rotating breech, which, nevertheless, permits the breech to be fully rotated by hand or otherwise, when the trigger is not drawn back.

No. 11,420.—John E. Earle.—*Improvement in Callipers, Compasses, or Dividers.*—Patented August 1, 1854.

Claim.—I claim the combination of the hinged arms C C, screw-rod E, and nut F, with the hinged legs of compasses, or dividers, and callipers, for the purpose of moving or holding said legs in both directions anywhere within the line of their sweep, substantially as described.

No. 11,421.—W. R. Glover.—*Improved Pen.*—Patented August 1, 1854.

The improvement and claim consist in attaching lips *c c* to the pen C, for the purpose of preventing the ink from ascending the pen and coming in contact with the fingers.

No. 11,422.—Isaac Gregg.—*Improvement in Brick Machines.*—Patented August 1, 1854.

This improvement appertains to a description of brick machines which the present inventor has before patented, the general characteristics of which are, that the clay is pressed into mould D of a reciprocating mould-frame by a roller G placed within the hopper, and the bricks are expelled from the mould by the action of the lifter E upon the followers *o o*, the lifter itself being operated by the action of the mould-frame upon the projections *u u*; and it consists, first, in giving a quivering motion to the sand-box C, which performs the double function of pushing the bricks, when expelled from the mould, upon an adjoining table, and dusting the empty moulds by projecting a pin *p* therefrom, and causing it to run upon a serrated edge *r*. Secondly, combining with the roller G the cutting and pulverizing wheel H

Claim.—I claim giving a quivering or shaking motion to the combined brick-discharger and mould-duster C, by means of an elastic pin *p*, which projects therefrom, acting upon the serrated edge *r*, or by any other equivalent means, for the purpose set forth.

Also, I claim the cutters or pulverizers H H, when arranged and operating substantially as herein described, in combination with the pressure-roller G, for the purpose of breaking up and pulverizing the hard crusts of clay produced by said roller, and for properly working and supplying clay to the mould.

No. 11,423.—B. F. GOLD.—*Improvement in Lathing Buildings.*—Patented August 1, 1854.

This invention consists in a frame so constructed and arranged with spacing-pins, slides, and gauges, that laths can be applied to a wall a break at a time, and at any width or space between them that may be required.

Claim.—1st. The mode of making spaces between lath by turning spacing-pins, which are attached to slides, as specified, the mode of turning being by arms.

2d. Stationary spacing-pins, to make equal spaces between breaks of lath, and as a permanent footing against which lath are spread to touch the gauges. The spacing-pins are on the rear of the frame.

3d. The gauges, which are placed in front of any required number of lath, and are requisite to control the width of breaks, the spaces between lath, and to keep them level.

No. 11,424.—A. J. GIBSON.—*Mode of attaching Thills and Poles to Vehicles.*—Patented August 1, 1854.

This invention consists in attaching thills or poles to vehicles by means of a steel spring *c c*, thereby preventing the rattling and wearing of nuts and bolts, and avoiding the danger consequent upon the same, the draught being directly upon the axle and the cross-bar; and by means of the stay or brace *m* any required position can be given to the thills or poles.

Claim.—To the manner of attaching thills or poles to vehicles by means of a steel spring, or its equivalent, substantially as set forth.

No. 11,425.—A. J. GIBSON.—*Mode of attaching Whiffle-Trees to Vehicles.*—Patented August 1, 1854.

This invention consists in attaching the whiffle-tree to vehicles by means of a steel spring *e*, one end being made fast to the whiffle-tree, and the other to the centre and front of the forward axle, thus allowing a lateral play to the whiffle-tree sufficient to correspond to the movement of the horse.

Claim.—To the manner of attaching the whiffle-tree to vehicles by means of a steel spring, in the manner and form substantially as set forth.

No. 11,426.—JOSEPH HYDE.—*Improvement in Wash-Boards.*—Patented August 1, 1854.

This invention consists in forming the surface of a wash-board B of a congeries of projections or knuckles, prominent and distinct, (although not necessarily disconnected,) and of a substance in itself elastic or semi-elastic; and also in combining with such wash-board a rubber C, which may be a scouring-brush with elastic knuckles on its reverse side, so arranged as to present either surface to either side of the wash-board, at the will of the operator.

Claim.—I claim as my invention—

1st. The employment of the elastic knuckles, each distinct, but the whole forming a compact series over the whole rubbing surface of a wash-board of any usual or convenient form, by method substantially as described.

2d. I claim, in combination therewith, the rubber connected to it, substantially as described, so as to reverse to either side of the board, and swivelling, if desired, in its own immediate bearings, for the purpose described.

No. 11,427.—JOHN M. HATHAWAY.—*Improvement in Shot-Pouches.*—Patented August 1, 1854.

This invention and claim consist in the combination of the projections, slots, and thumb-catch *c*, so arranged that the charger can be attached to and removed from the pouch without the need of male and female screws.

Also, in gauging the charges by means of the inner and outer tubes or barrels *d D*, moving one within the other, and adjustable by means of the sliding-rod *f* working in the hollow thumb-lever E.

No. 11,428.—DAVID A. HOPKINS.—*Improvement in Railroad-Car Couplings.*—Patented August 1, 1854.

The nature of this improvement consists in providing a grooved or serrated spring-block within the draw-head of the car, for the purpose of pressing against the end of the coupling-link, and holding it in any desired position.

Claim.—I do not claim the application of the spiral spring H to the block F, for spring-blocks have been previously used. Neither do I claim the employment or use of an India rubber spring for buffers, for that has been used in various ways. Neither do I claim the buffer, nor any peculiar arrangement thereof, nor the draw-head, irrespective of the peculiar form of the mouth, as herein shown.

But what I do claim, is having the draw-head formed with a wide or flaring mouth and narrow neck, as herein shown, and using in connexion therewith a block F, the front surface of which is of circular concave form, with recesses *m* across it, whereby the links may be held in a horizontal or inclined position, as herein shown and described.

No. 11,429.—WILLIAM F. KETCHUM.—*Improvement in Propellers.*—Patented August 1, 1854.

The improvement and claim consist in the arrangement of the centrifugal wheel A relatively to the charge and discharge openings of the casing B, and the division of the interior of the said casing by the partitions *a* and *b*, so as to form the openings C D, so that the wheel shall take in water at its centre, and discharge it out of said openings on each or both sides of the stern-posts.

No. 11,430.—WILLIAM H. MORRISON and M. W. E. DORAN.—*Improved Mortising Machine.*—Patented August 1, 1854.

The drawing presents a front view of this machine.

Claim.—The combination, in boring and mortising machines, of the alternately rising and falling chisels D with the auger A T, as above set forth, or by any equivalent mechanical means.

Also, the combination of a number of such sets of chisels and augers, when necessary, for cutting mortises of greater or less length.

No. 11,431.—WILLIS MANSFIELD.—*Improvement in Houses for Switch Tenders.*—Patented August 1, 1854.

The object of this improvement is so to connect the switch-rails with the door of a box or house for the switch-tender, that egress is permitted only when the switch is arranged safely and continuously, thereby preventing accidents from the carelessness of the switch-tender.

Claim.—I claim neither switches, switch-houses, switch gates, nor latches, nor do I claim any kind of door or shutter, or connecting-rods or their equivalents, as a means of actuating the same. But what I do claim is, the connexion between the switch-house door, or its equivalent, and the switch or the actuating mechanism thereof, when said mechanism is arranged in the manner and for the purposes set forth.

No. 11,432.—WILLIAM WATSON.—*Improvement in Saws for Sawing Stone.*—Patented August 1, 1854.

This saw is constructed with vertical channels *b b* across the sides of the plate, for the free passage of sand to the lower edge; and also with recesses in the saw-plate to receive and hold a supply of sand, and permit it readily to find its way under the straight part of the edge of the saw-plate.

Claim.—I claim making saw-plates for cutting stone with channels at the sides, substantially for the supply of sand to the lower edge, as set forth. Also, the excavations or notches on the lower edge, substantially as described, to contain and permit the sand more effectually to get under the edge of the saw-plate, as set forth.

No. 11,433.—BENJAMIN F. BEE.—*Improvement in Feed Apparatus for Steam-Boilers.*—Patented August 1, 1854.

Claim.—I claim: 1st. The double slide-valves C D, water-chest E, and steam and water passages (*m n o* and *c*), with the water-supply-vessel F, when the said supply-vessel is made to form a compressed air-escape-valve by the immersion ot the supply-pipe P below the top surface of the water therein, or the compression of the air in the supply-vessel being otherwise equivalently produced, and so that a strong atmospheric pressure is brought to bear upon the surface of the water, to serve conjointly with the steam passing from the water-chest through pipe into the compressed air-receptacle, to establish that necessary equilibrium of pressure above and below the water in the supply-vessel to produce a flow, and whereby the effect by condensation of the steam entering the supply-vessel is neutralized and a more immediate and certain discharge of water into the chest insured, as herein set forth, the whole being constructed and operating substantially as specified.

2d. I claim the method of varying the height at which the water will be sustained, by raising and lowering the chest E and its attachments.

No 11,434.—G. W. COATS and J. RUSSEL.—*Improvement in Machinery for Sticking Card-Teeth.*—Patented August 1, 1854.

The nature of the invention is best shown by the claims; reference being had to the accompanying drawings, of which figure 1 is a plan, and figure 2 an end-view of the machine, looking in the direction of the arrows. Figure 3, section through line A A on figure 1. Figures 5, 6, 7, 8, sections of detached parts.

The claims are: 1st. The mode of imparting the intermittent motion to the main carriage *b*, for spacing the teeth, and reversing the same by means of the screw-lever h^1, attached to the main carriage and passing through a nut i^1, mounted on suitable boxes and rotated by cog-gearing l^1 m^1 p^1, when this is combined with a clutch q^1, operated by a cam c^1, to clutch and unclutch the wheel p^1, which receives motion from the wheel or wheels on the main shaft, and imparts the required and measured intermittent motion to the nut.

2d. The employment of the cams u^1 u^1, on the main carriage, which at the end of each traverse motion act on a lever v^1, connected and combined with and operating the clutch c^2, to clutch and unclutch the wheel d^2, which receives motion from the main shaft, to operate the shifting wheel h^2, which operates the double clutch *t* on the main shaft.

3d. The mode of operating the second carriage *a*, which holds the sheet of leather *f*, to determine the space between the rows of teeth by means of the shifting-cam called the twill cam d^1, and the shifting sector cog-wheel j^2, which in turn imparts motion by the cog-wheels and shaft to the cog-wheel through which passes the feathered shaft mounted on the main carriage, and which, in turn, imparts the required motion to the drums *i i*, for lifting the second carriage at the end of each complete motion of the main carriage.

4th. Making the nut i^1 on the screw-leader in two parts, (figure 5,) divided by a plane at right-angles to the axis; when the two parts are attached together so that they can be turned on each other, so that the threads can be set to any wear of the threads.

5th. Making the arbors of the two rollers K^2 K^2 (figure 8) with cylindrical bosses S^2 S^2, to determine their distance apart, in combination with the mode of mounting them between boxes, and without interposed boxes; the said arbors being prevented from having end-play by means of V-shaped or curved fillets on the arbors, fitted to corresponding cavities in the boxes.

6th. Mounting the bending-fingers e^3 e^3 in the sliding top-plate x^2, independent of and below the slide or carrier u^2 of the former, around which the teeth are bent; the carrier being provided with an inclined plane or cam p^3, acted upon by a like inclined plane or cam o^3, on the top plate of the fingers, substantially as described, so that, as the fingers are drawn back the former shall be lifted up preparatory to its back-motion, as fully set forth.

No. 11,435.—Halvor Halvorson, assignor to H. Halvorson and Horace Barnes.—*Improvement in Measuring Cloth on Looms.*—Patented August 1, 1854.

The nature and operation of this invention will be understood by reference to the claim and accompanying drawing.

Claim.—The lancet or cutter K for puncturing the cloth; also the mechanism applied to the lay and the cutter for moving said cutter towards and into the cloth, and afterwards instantly out of the cloth, such mechanism being the slide S, the ratchet T, the bar F with its tooth *g*, and the spring *i*; also mechanism for moving the slide-bar F into and out of the path of the stud of the lay, as specified, such mechanism being the bar M, the notched wheel L, the gear-wheel H, the single-toothed pinion G, the worm-gear E, the screw D, and the wheel C, as applied or connected together, and operating as described. Also, arranging the lance or cutter on the breast-beam, and close to the edge of it, where the cloth is bent downwards towards the cloth-roller, and when such lance or cutter has mechanism applied to it and operated by the cloth and the lay, so as to put the said lance or cutter into operation, as specified; such arrangement of the lance or cutter on the breast-beam, and in close proximity to its rear upper corner, enabling the lance or cutter to pass freely through the cloth, without danger of the latter being sprung away from it by the force of the blow and resistance of the cloth, as will occur when the lance is situated below the breast-beam and becomes worn or dulled.

No. 11,436.—Samuel T. Thomas and Eliza Ann Everett, administratrix of Edward Everett, deceased.—*Improvement in the Process of Warping and Dressing Yarns.*—Patented August 1, 1854.

The nature of this invention consists in warping and dressing directly from small spools to sectional loom-beams, which, when completed, are arranged side by side on a shaft and placed in the loom; and also

in the method of drying the yarns after they have passed through the sizing troughs. In the accompanying drawing, *a* is the frame, *b b* the small spools; the yarns pass from these spools through guides *c c*, between the sizing rolls *d d*, thence through guides *e e*, and over the roll *f* to the slotted fan-cylinder *g*, thence over the heated metallic cylinder *m*, and under the heated cylinder *n*, thence over the heated cylinder *o* and under the second slotted fan-cylinder *p*, and from thence over the roll *q* and through the guides *r* and *s* to the sectional loom-beam *t*.

Claim.—Warping and dressing yarns directly from small bobbins (instead of large section beams) to sectional loom-beams, for the purpose of securing a uniform tension in the yarns wound upon the loom-beams, and also affording greater facilities for readily producing a variety in the stripe of the fabric; also, the fan-cylinder for drying the yarns, which consists of a cylinder composed of slats, arranged with spaces between them, and around which slats the yarns are made to pass, revolving-fans being arranged within the said cylinder, and revolving independently of, and at a much more rapid rate than the cylinder, whereby a large portion of the yarns are kept in a gentle current of air and rapidly dried.

No. 11,437.—Charles Monnin and Wm. M. Booth.—*Improvement in Fastening Lanterns.*—Patented August 1, 1854.

A hollow ring C is applied to the outside and near the base of the lantern on its inner surface; at two opposite points there are hinged to it a metallic dog and clamp, capable of moving in and out of a slot or opening whenever the ring on the outside is actuated by hand or made in any way to change its position: and by this means the lantern and lamp may be connected and disconnected.

Claim.—We claim the application to lanterns of the before-mentioned cylindrical or hollow ring, enclosing one or more metallic clamps or dogs, which move horizontally through apertures into a groove, as herein described and set forth.

No. 11,438.—William S. McLean.—*Improvement in Car-Wheels, with independent Flange and Tread.*—Patented August 1, 1854.

The nature of this improvement consists in having the flange portion of a compound wheel (or wheel with flange and tread moving independently) "dished" outward from its hub, then bending back in a reversed direction toward its extremity or flange, and fitting into a corresponding circular recessed face of the tread-wheel, so that the two portions of the said wheel shall mutually enter into and support each other.

Claim.—I do not claim the separate and independent flange and tread; as that has been patented, as described, by James Jones, William Howard, and others.

But what I do claim is the above-described car-wheel, with the flange and tread capable of separate action, when they are made to interlock and mutually support each other, so as to prevent any strain tending to separate them from being thrown entirely upon the journal.

No. 11,439.—WILLIAM H. PALMER.—*Improvement in Threshing Machines*—Patented August 1, 1854.

Claim.—I claim the peculiar combination of the screens T, K, N, P, and O, with chutes M L, arranged as represented in the drawing; whereby the grain is screened very effectually and subdivided, according to its quality, in four parts, immediately after threshing, and the chaff and dust are blown away.

No. 11,440.—BRADFORD S. and CHARLES M. PIERCE.—*Improvement in Moulds for Cement or Earthen Pipes.*—Patented August 1, 1854.

In the figure, A represents the mould, which is constructed of a sheet of some elastic metal, bent into the form of the exterior of the required pipe. The meeting-edges of the sheet overlap and have loops (*a*) formed on them, through which passes a rod *b* to hold the mould firmly closed. When the pipe is moulded, and ready to be discharged from the mould, the rod *b* is withdrawn, and the elasticity of the metal causes the mould to spring suddenly from the newly made pipe, thereby permitting it to be conveniently removed.

Claim.—I claim the combination of a core and spring-case, substantially as set forth.

No. 11,441.—ALEXANDER H. PETSCH.—*Improved Dumping-Car.*—Patented August 1, 1854.

Constructing a dumping-car with two inclined planes made of iron bars with curved ends and projecting beyond the outer edge of the frame, whereby the two boxes or bodies A A, having wheels H H and joints B B, can be unloaded by their specific gravity, and when unloaded be brought back to their original position, by means of the cylinder D and chains C.

Claim.—I claim the construction of railways laterally across the carriage, or otherwise; by which means I am enabled to dump the boxes by their own gravity when let go from the apex of the plain, without labor to the operator, substantially as set forth in the above specification.

Also, the projection of the railway beyond and outside of car-carriage; by which means I am enabled to dump the boxes at such an angle as to discharge their contents, whatever may be the character of the load.

No. 11,442.—SANFORD STONE.—*Self-loading and Dumping Cart.*—Patented August 1, 1854.

This improvement consists in the arrangement of the cart-body with a scraper on its fore end, so as to tilt forward to the ground for the purpose of scraping up the earth and loading itself immediately from the ground by its own action.

Also, in the employment of an endless horizontal belt for, and in the place of, the bottom of the cart-body, so arranged and operated as that

it will be made to revolve in the proper direction during the time of loading and unloading the cart (but will not act while drawing the cart from place to place), for the purpose of loading and dumping. Also, in the detailed arrangement of mechanism for tilting the cart in the different directions.

No. 11,443.—SIMEON SHEARMAN.—*Improved Mode of Cleaning and Feeding Grain to Grinding-Stones.*—Patented August 1, 1854.

Claim.—I claim passing the grain to be fed to the stone through a cleaning apparatus placed between the hopper and the stone, and driven by the stone, in the manner as exemplified by the drawing, where arch A, supporting the cleaning apparatus, rests on the stone, and, revolving with the latter, causes the cylinder D to revolve around the immovable beater-shaft C. Thus the grain is cleaned while dropping down from the hopper, and the smut is carried away by the air-spouts G G. Cylinder D is lifted the convenient height by lever J, to admit the desired quantity of grain upon the stone.

No. 11,444.—JOHN STULL.—*Improvement in Saw-Mills.*—Patented August 1, 1854.

Figure 2 is a plan; figure 1, a side elevation showing the construction of the swinging-frame.

Claim.—I claim the swinging-frame B^1, or its equivalent, carrying a circular saw O, so constructed and arranged that the saw may cut its full depth in crooked as well as straight logs. Also, the revolving self-acting wedge I, so arranged as to vibrate and accommodate itself to any inequalities in the stuff to be sawed. Also, I claim the floats or scrapers S^1, hinged to the carriage, or their equivalents, to push the saw-dust in such direction as may be desired. Also, the circular saw in combination with guides, so arranged as to steady and support the saw when it enters and cuts a score in the log, to prevent the saw from being swerved by knots, cross-grained or hard places in the wood sawed.

No. 11,445.—LOUIS SCHWINGROUBER.—*Improvement in Slips for Pulling on Shoes.*—Patented August 1, 1854.

The nature of this invention consists in the use of a spring-clamp *b* in combination with the shoe-slip *a*, by means of which the back of the shoe is securely held while being pulled on to the foot, and the metallic slip guides the heel down into place, in the same manner of the ordinary shoe-horn or slip.

Claim.—I claim the spring-clamp *b*, with its concave holding-jaw 7, in combination with the shoe-slip *a*; the parts being constructed and operating substantially as set forth in the specification.

No. 11,446.—GEORGE SOUTHER.—*Improved Tires for Carriage-Wheels.*—Patented August 1, 1854.

Claim.—I claim the iron tire *a*, with two projecting flanges *b b* all around, leaving a space between them for the purpose of allowing an entire ring of vulcanized rubber, or other elastic material, to be stretched over and sprung between said flanges; said tire projecting over the outer periphery of the flanges, serving to keep the iron tires unimpaired, and contributing greatly to the comfort and economy of carriages.

No. 11,447.—ELI WHITNEY.—*Improvement in Fire-Arms.*—Patented August 1, 1854.

Claim.—The method of constructing the sear and lock-bolt in one piece (*h i*), and so combining said piece with the trigger and spring (*k*) that the sear cannot release the hammer, except when the chambered breech will be firmly locked in its proper position.

Also, the combination of the trigger with the spring *k* and the lock-bolt *i*, when the lock-bolt is of the same piece as the sear, for locking the chambered breech, and discharging the pistol. Also, the combination of the three springs *w*, *m*, and *k*, all secured by one screw, with the catch-bar M, trigger F, and the lock-bolt (*i*), and sear *h*, when the whole are arranged as shown and described.

No. 11,148.—HORACE WOODMAN.—*Improvement in Machinery for Cleaning the Top Cards of Carding Machines*—Patented August 1, 1854.

Claim.—The combining of litter-cams T T and a brush-bar V with one rotary-shaft R, so that by the movement of such shaft, as specified, the operations of raising and depressing a top card, and cleaning it, may be effected.

No. 11,449.—SIMON WILLARD.—*Improvement in Bedsteads.*—Patented August 1, 1854.

This bedstead consists of four flanged iron posts, and two or more bed-sustainers, or boxes, in which the mats are laid for sleeping on; the peculiar construction of it rendering it convenient to be taken down in a very short time, and the whole deposited in a space not larger than the two bed supporters when laid together.

Claim.—I claim constructing the bedstead of sheet-metal posts (B) bent longitudinally at right-angles, to which are secured transverse flanges (*f*), and of a sheet-metal sustaining-box (*a*), which is supported at its corners by said flanges, and secured in place by rods (R) passing down through both the flanges and sustaining-box, arranged and combined substantially in the manner and for the purposes herein set forth.

No. 11,450.—ALBIN WARTH.—*Method of Applying Power to a Fire-Engine.*—Patented August 1, 1854.

The piston of the pump is operated by cranks; instead of brakes, ordinary pinions and racks are used.

Claim.—I claim the arrangement and combination of a horizontal pump with a series of pinions and cranks, as described, by means of the long double-rack and spring attached cross-heads, and platforms, as set forth.

No. 11,451.—WILLIAM B. WALKER.—*Improvement in the Manufacture of Brooms and Brushes.*—Patented August 1, 1854.

The nature of this invention consists in compressing the broom-corn, or other material, which is done in a suitable press for such purpose, and then forcing it into a chamber while in a compressed state.

Claim.—I claim the process of manufacturing brooms or brushes by compressing the material, and forcing it into a chamber while in a compressed state, and securing it by means of the clip or other device, whereby the same end is obtained. That the material may be compressed by other devices than as described above, I am conscious from experiment; therefore it is the *principle*, practically carried out, which I claim, as well as the device by which it is done; the spring-catch and tongs mentioned in my caveat, I consider unnecessary.

No. 11,452.—WILLIAM ANDERSON.—*Improvement in Harrows.*—Patented August 1, 1854.

This invention consists in placing the tooth F in each hinge G G, to sweep the space between the bars A A.

Claim.—I claim inserting a tooth in each hinge at G G, so that no part of the ground escapes being pulverized; whereas in other harrows, with hinges, a large space in the centre of the harrow escapes.

No. 11,453.—THOMAS DAUGHERTY.—*Improvement in Machine for Lasting Boots.*—Patented August 1, 1854.

This instrument is composed of two pair of pincers, so constructed and connected that they are both closed by one screw, and also drawn together at the same time. In the figure, J J represent the jaws, standing at one side of the instrument, to allow room for piercing the hole or driving the peg; B B are the short levers; S, the screw; T, the nut; G, the knob, which is a fixed shoulder on the screw S.

Claim.—I claim so constructing the machine, as described, that when drawn up, there is ample room for putting in the tacks or pegs, and having a heel which serves as a fulcrum; so that by pressing back the top of the machine, the entire jaw may be raised clear of the sole, and prevent the jaws from ruffling up the inner sole.

No. 11,454.—CHARLES K. FARR.—*Improvement in Cultivators.*—Patented August 1, 1854.

This invention claims to be an improvement upon the patent of William C. Finney, on account of the greater solidity of the parts, and the

better mode of fastening to beam. Standard *b b*, plate *a*, flange *c*, and brace *d*, are all cast in one piece, and connected to beam B, by means of bolts *i i*.

Claim.—I claim the hollow standard *b b*, with ground-plate for firmly uniting the beam to the implement by means of bolts passing through said standards, as hereinbefore set forth.

No. 11,455.—ROBERT GRANT.—*Improved Hydraulic Press.*—Patented August 1, 1854.

The nature of this invention consists in adapting an India-rubber diaphragm, or flexible pressure bag, or water-tight medium, to the inside of a vessel of suitable strength, in such manner as to enable the substances required to be pressed, squeezed, or wrung, to be placed upon the outside of the diaphragm, while water or steam, air or gas, is introduced by any means available upon the other side of said diaphragm, with sufficient force to cause the diaphragm to press upon the material, and thrust the same upon the opposite perforated sides or top of the vessel, thereby pressing said material into any desired shape, or squeezing or wringing from the material such juice, fluid, or liquid, as it may contain.

Claim.—I claim the combination of a flexible water and air-tight bag or medium, of vulcanized India-rubber cloth, with an outside wire-vessel, or its equivalent, in such manner as that when water or steam shall be forced into the inside of the bag, the bag or medium shall be thereby pressed outward, and any material contained between the same and the exterior wire-cylinder shall thus be wrung or squeezed nearly dry, by being pressed against the interstitial holes, as before substantially described.

No. 11,456.—JOHN S. HALL.—*Improvement in Ploughs.*—Patented August 1, 1854.

Claim.—1st. I claim dissimilar sized hinges *x x*, causing the wings of the mould-board *c* c^1 to raise in proportion to their expansion, in connexion with the curved hinged braces E E^1, sustaining said wings *c* c^1 when expanded, and admitting of extreme contraction without destroying the requisite form of the mould-board under all its changes, (a requisite hitherto not attained,) for the purpose of adapting the plough to a variety of work or uses.

2d. I claim the effectual securing of an iron beam to an iron standard by means of the inclined segmental slot S, and bolt and nut, or their equivalent, operating in the manner described.

No. 11,457.—ABRAHAM JACKSON.—*Improvement in Horse-power Hoisting-Machinery.*—Patented August 1, 1854.

This improvement in hoisting-machinery is for the purpose of enabling the operators to accomplish the hoisting, lowering, and hauling

in at will, while the horse or other power is maintained in continuous and equable motion. The main driving-wheel *b* receiving motion from the inclined horse-plane *a*, or otherwise, communicates it to the wheels *d* and *e*, which play loosely on the shaft *c* of the hoisting-drum c^1, and either of which are engaged, or both of which are disengaged, by means of the clutch *f*. Two wheels, *j* and *k*, playing loosely upon the shaft *h* of the hauling-in drum *i*, and accompanied by their clutch h^1, receive motion, the first directly from pinion j^1, and the second from the pinion through the wheel R^1 and pinion *m*. The number of teeth in these wheels and pinions are proportioned to give the proper relative rates of the two drums, whether hoisting or lowering, and whether letting out or hauling in. The speed of drum *i* can be checked at will by the brake *o*, operating on the straps upon the friction wheels *n* and n^1.

Claim.—The arrangement of the shafts *c* and *h*, with their hoisting-drums c^1 and *i*, so combined by shifting-clutches and gearing that the various operations for the hoisting and lowering of goods into or from ships, warehouses, &c., may be effected by a horse or other power, acting continually in one direction, substantially in the manner and for the purpose described herein.

No. 11,458.—H. N. Black.—*Improvement in Machinery for Cleaning and Drying Grain.*—Patented August 1, 1854.

Claim.—I claim the employment of the inclined perforated cylinder P, for drying grain by the action of centrifugal force, in combination with the apparatus C, B, D, E, above it, for cleaning the grain by water.

The cleaning of grain by water, as an independent device, is disclaimed.

No. 11,459.—Martin H. Mansfield.—*Screen for Clover-seed Hullers.*—Patented August 1, 1854.

Claim.—I claim constructing the screen for cleaning clover-seed or grain in several sections, *b*, *c*, *d*, jointed together, and made independently adjustable at each joint, for the purpose of facilitating or retarding the passage of the straw, chaff, or other impurities, over it, according to the nature or condition of the latter, substantially as herein set forth.

No. 11,460.—Daniel W. Shares.—*Improvement in Cultivator.*—Patented August 1, 1854.

The peculiarity of this cultivator is not the expanding wings, but the teeth *c c*, inserted at the under side of the wings, so as to loosen up the bottom of the furrow made by main point and the part B of the wings. Expanding wings are disclaimed, as such.

Claim.—I claim providing the expanding and contracting hoeing wings B on either side, with cultivator-teeth C projecting downwards

on the inside of the hoeing wings or scrapers, as and for the purposes specified.

No. 11,461.—JAMES W. SIKES.—*Improvement in Withes for Masts of Vessels.*—Patented August 1, 1854.

The improvement consists in having the main bar J of an L form, attached to the cap or withe by an eye screw-bolt *d*, provided at each end with shackles *k* k^1, so that this one cap supports the fore main lift block and the peak block.

Claim.—The construction of a withe with a main bar and shackles, substantially as described; so that one withe will serve the purpose of the two heretofore used, and so that all its wearing or chafing parts may be removed and replaced by others without disturbing it on the mast, as set forth.

No. 11,462.—JOHN W. WHITTAL and WILLIAM W. PENDLETON.—*Improvement in the Manufacture of Hats.*—Patented August 1, 1854.

This invention consists in the combination of gutta-percha in sheets with felt-cloth, so as to enclose the gutta-percha between two thicknesses of said felt-cloth, and afterwards forming hats thereof by pressing into properly shaped moulds while the gutta-percha is in a plastic state.

Claim.—The above description substantially embraces the inventors' claim. No illustration.

No. 11,463.—D. F. MELLEN, assignor to D. F. MELLEN, J. F. AUGUSTUS, and S. A. EATON.—*Improvement in Machines for Planing Metals.*—Patented August 1, 1854.

Claim.—The circular table E, the rotary motion of the table being dependent upon the longitudinal motion of the carriage.

No. 11,464.—WILLIAM BULLOCK, assignor to BARTON G. MORSS.—*Seed-Planter.*—Patented August 1, 1854.

The important features of this invention are, a wheel consisting of two plates E E^1, one of which is perforated all around the hub to distribute seed in drills, whilst the other plate is perforated only at a point opposite tubes J for planting in hills. The seed passes from hopper F into the wheel at *a*, and is distributed at the circumference. I is a guard preceding the wheel, and L is a marker to gauge the hills into cross-rows.

The same wheels, with one side to the hopper, plant in drills; and by turning the other side to the hopper, plant in hills.

Claim.—1st. I claim the seeding-wheels, formed substantially as described, so that the seeds pass in at or near the centre of the wheels and out of the periphery. 2d. The arrangement of one and the same wheel for sowing in drills and planting in hills. 3d. The arrangement of tubes J, substantially as herein described and for the purpose set forth.

4th. The guards I, in combination with the seeding-wheels; and, 5th, the marker L, for the purpose of indicating the position of each hill, thereby enabling the operator to plant in hills, forming rows both ways across the field.

No. 11,465.—R. D. BARTLETT.—*Improvement in Brick Presses.*—Patented August 8, 1854.

It has been common to make bricks of clay, either tempered or reduced to powder; this machine is designed to make bricks of the clay in its crude and lump state, and its general character is shown in the drawing. The lumps of clay, being thrown into the hopper G, are crushed through the metallic grating H into the mould N, where the brick is compressed by the plunger P against the hollow and steam-heated bulk-head F^1. The mould N has an opening *g* through which the clay is forced when the pressure passes a certain point, and thus the uniform density of the brick is secured. The bulk-head F^1 rising, the brick is expelled from the mould N upon the plunger C^1, which is also heated by steam, and which sinks with it, and the bulk-head F^1 following, forms at the same time a resisting surface for the pressure of a new brick by plunger P, and of the former brick by the rising of plunger C^1. The lever B^1 being hung loosely on its fulcrum K^1, when the shorter arm of said lever is depressed, as soon as the bulk-head F^1 is stopped in its descent, the centre of the lever's motion is transferred from the pivot K^1 to i^1, and the plunger C^1 is forced up, pressing the brick against the bulk-head until the motion of the lever B^1 is reversed, the centre of motion restored to the pivot K^1, and plunger C^1 and bulk-head F^1 both rise together.

Claim.—1st. Making bricks of crude, untempered, and unground clay, by the means herein described, or by any other means substantially equivalent thereto.

2d. The manner herein described of forcing the clay, in the state in which it is dug, through the grating H in small quantities at a time; by which means it is freed from the stones which it may contain, and prepared to be acted upon by the plunger P in the manner set forth.

3d. The method of accurately gauging the quantity of clay in each brick, and of submitting them all to a uniform pressure by means of the hole *g* in the side of the mould N, as described.

4th. The manner of arranging and operating the bulk-head F^1, by which it is enabled to assist simultaneously in the formation of the bricks, one in each mould.

5th. The combination of the bulk-head F^1 and the plunger C^1 with the lever B^1, constructed and arranged as described, the lever B^1 having sufficient play upon its fulcrum K^1 to enable it to operate in the manner and for the purpose set forth.

6th. Making the parts F^1 and C^1 of the mould hollow, and heating them with steam, in the manner described and for the purpose set forth.

No. 11,466.—WILLIAM S. BABCOCK.—*Improvement in Dumping Wagons.* Patented August 8, 1854.

This invention consists in the combination of the cast-metal boxes or sockets P P P with boxes or sockets S S S, containing concave wheels, the convex track *d d* and ground track *z z z*, hooks W W and V V, so arranged with gearing, drum, crank, ratchet, and chains, that a wagon can be adapted to all ordinary uses and yet enable the person having it in charge to dump the load (in any place) easier and quicker than by any other method known.

No 11,467.—EDEN A. BALDWIN.—*Improved Wooden Tubular Bridge.* Patented August 8, 1854.

This invention consists in constructing a tube of sufficient diameter for the passage of a railway train, using planks or other suitable timbers, placed longitudinally and dowelled together, and the whole firmly bound with strong iron bands, or hoops, that can be tightened by screws and swivel from the inside, with a trestle or frame-work supporting a railroad track, whether the track be placed within the bridge or upon its top.

Claim.—Constructing a bridge by the combination of the longitudinal strips of wood, the transverse iron bands, and the arrangement for tightening the same from the inside by a screw and swivel, with the trestle or frame-work for supporting a railroad track, and receiving the strain directly on the bands, whether the track be placed within the bridge or upon its top; the whole arranged and combined substantially as herein described, and forming a cylindrical or tubular bridge of great strength, durability, and simplicity of construction.

No. 11,468.—WILLIAM BONNEY.—*Improvement in Imitating Marble.*—Patented August 8, 1854.

Claim.—The use of a syringe, with which the veins, spots, or other particular designs of marble are laid down, either on the ground-layer of cement prepared for the piece of artificial marble or on the polished surface of the mould, and the ground laid upon them.

No illustration.

No. 11,469.—NATHANIEL A. BOYNTON.—*Improvements in Stoves.*—Patented August 8, 1854.

The claim fully sets forth the nature of this invention, the object of which is to avoid the occurrence of cracks and joints in heavy castings used for this purpose, and through which sulphurous and other deleterious gases find an exit.

Claim.—Constructing the entire fire-chamber of one single casting, or piece, substantially in the manner and for the purposes set forth.

No. 11,470.—Isaac W. Brown.—*Improvement in Fire-Arms.*—Patented August 8, 1854.

This invention and claim consist in giving the cylinder a partial rotation by the cocking of the fire-arm, (not sufficient, however, to bring the cap and its nipple entirely under the hammer,) and completing the movement of the cylinder in the act of discharging the piece, so that the cap comes to its place just in time to meet the descent of the hammer which explodes it.

No. 11,471.—Wm. S. Chapman.—*Improved Carriage Clip to Prevent Rattling.*—Patented August 8, 1854.

Claim.—The application of blocks *a a*, of India rubber or other equivalent elastic material, between the ends of the carriage-shafts and clips upon the axles, for the purpose of preventing wear, rattling-noise, and accidents.

No. 11,472.—Nathan Chapman.—*Improvement in Cotton Presses.*—Patented August 8, 1854.

The nature of this invention consists in having the hub of the toothed wheels, on which the chains which raise the follower work, formed with recesses in them to receive the lower ends of the chains when wound up, and thereby cause the chains to exert a pressure inside of the bearings of the wheels, and retain the follower in its elevated position without any other device being employed for that purpose.

D D are toothed wheels, on the inner side of which are projections *h*, which extend from the hubs *i i* of the wheels to their peripheries in a spiral or coil form; and in the hubs of the wheels are recesses *j j*, which are cut in the hubs rather past their centres. The rods *k* carry the follower.

Claim.—Forming the hubs *i i* of the wheels D D with recesses *j j* in them, to receive the rods or links K K, when the chains are wound up on the projections *h* on the wheels, in the manner and for the purpose shown and described.

No. 11,473.—Daniel Close.—*Improvement in Sawing and Planing Machines.*—Patented August 8, 1854.

Claim.—The "arrangement of one or more saws *t*, to cut on the downward stroke, in combination with one or more planes *v*, to cut on the up stroke of the crank *f*."

No. 11,474.—Silas Constant.—*Improvement in Rosin-oil Lamps.*—Patented August 8, 1854.

Claim.—Constructing the tubular wick-guide *g* without any openings through it except at or near its lower end, and making said guide of

such a size as to allow a clear annular space between it and the wick for the oil to rise in around the wick, for the purpose of preventing the oil inside of the upper portion of said wick-guide from mixing with the body of oil outside of the same, by which the oil in contact with the upper portion of the wick will be raised to a considerably higher temperature than the oil in the body of the lamp, substantially as herein set forth. Also, regulating the flame of the lamp by raising or lowering, in any convenient manner, the inner conical tube *m*, which immediately surrounds the upper end of the wick, substantially as herein set forth.

No. 11,475.—LEWIS CUTTING.—*Improvement in the Stop Motion of Speeders, &c.*—Patented August 8, 1854.

This invention consists in preventing the throwing off of the belt by any other cause than that of the sliver breaking or running out, and in causing the belt to be thrown off when the sliver does break or run out.

In the drawing, A is a guide through which the sliver passes, thence through the trumpet B to the rolls C. The friction in the guide causes the trumpet to stand up, without which friction the sliver would sometimes be raised unequally from the cam and cause a slack therein, admitting of the falling of the trumpet, and tripping the shipper without the breaking or running out of the thread. A lever D is hinged at *i*, and plays between guides, said lever and guides 2 being attached to plate E. The trumpet-wire G is bent to pass through lugs 3, and terminate in an arm 4, which, when the trumpet drops, lifts up the lever D. H is a rock-shaft, having at one end the rod I projecting downward, and at the other end an arm J projecting upward. A lever K, connected by a wrist-pin to the rolls C, passes through a slot in the arm J, and is hollowed out at that point, as at 5. A chain 6 cements the lever K with the catch L, which holds the shipper M against the action of the spring 7 around it. When the lever D is down, the arm I passes over; but when raised up, this arm strikes it, throwing up the rod K, forcing its depression 5 out of the slot in the arm J, and by means of the chain 6 lifting the catch L. This catch L being released, the helical spring 7 throws the shipper M, which runs off the belt.

Claim.—The use of the hinged lever, moving in guides, for tripping the shipper and throwing off the belt, thus relieving the trumpet from any further duty in throwing off the belt than the mere raising of the lever.

Also, in combination with the hinged lever, the interposition between the can and trumpet of a guide, so arranged as to give sufficient friction to the roving when it rises irregularly from the can to prevent the dropping of the trumpet, and consequent throwing off of the belt, as described.

No. 11,476.—JOSEPH H. DAVIS.—*Improvement in the Manufacture of Pigments from Iron Ore.*—Patented August 8, 1854.

Claim.—Steaming the ores, in addition to the usual process of selecting, pulverizing, and heating the hematite and equivalent ores, for the purpose of obtaining the various hues of pigments, as desired. No illustration.

No. 11,477.—JOSEPH C. DAY.—*Improvement in Fire-Arms.*—Patented August 8, 1854.

This invention consists in the peculiar manner in which the barrel is connected with the stock and the stationary breech; in the sliding-collar over the stationary breech and the rear end of the barrel, for the purpose of making a close joint between the barrel and the breech; in the arrangements of the parts whereby the caps are caused to be supplied from a magazine in the stock to the nipple, by the movements of the hammer in cocking and discharging the piece. The tube is replenished without removing it from the stock, and the cap already on the nipple may be exploded without bringing another from the magazine.

Claim—I claim, 1st, connecting the barrel with the stock and stationary breech, by means of projections *a a* on its side, having one part of circular, and another part of wedge form, and fitting within recesses *b b*, in plates B B, or their equivalents, attached to the stock; which said recesses correspond in form with the circular part of the projections, but are wider than the wedge-shaped parts thereof, substantially as described, and thereby admit of a limited swinging movement of the barrel for the purpose of exposing its rear end, as set forth.

2d. The sliding-collar D^1 sliding over the stationary breech and the rear end of the barrel, substantially as described, for the purpose of making a close joint between the barrel and breech.

3d. Though I do not claim the tube *e*, the piston *i*, notched bar *k*, and spring *n*, separately or irrespective of the particular arrangement shown, I do claim their particular arrangement, as shown and described, whereby the following results are obtained, viz:

1st. A sure forward movement of the caps without the assistance of the spiral spring. 2d. Convenience for replenishing the tube without removing it from the stock. 3d. The explosion of a cap already on the nipple without bringing another from the magazine.

No. 11,478.—GEORGE C. FISK.—*Improved Device for Grooving Boards.*—Patented August 8, 1854.

A perspective view of the device for tonguing and grooving, upon which this patent was issued, is annexed.

Claim.—I claim this device in combination with circular saws for tonguing and grooving boards, at the same time that their surfaces are planed.

No. 11,479.—ORANGE N. FRARY.—*Improvement in Melodeons.*—Patented August 8, 1854.

Claim.—The arrangement of a melodeon with two sets of reeds, to be played with one set of keys in such a manner as to combine any two, three, or four of the parts, at pleasure, (each part containing a half set of reeds,) by the aid of an air-tight wind-chest and four valves B C D E, which are governed by levers *h*, and stops *k k k k*.

No. 11,480.—JOHN G. FULTON.—*Improvement in Machinery for Packing Salt.*—Patented August 8, 1854.

In the figure, *g* represents the rack upon the shaft of the stamper *f*, which rack meshes into cogs surrounding a nave *i*. The tooth *j*, which comes first into play, is fixed with a spring, so that in case it comes in contact with a tooth or cog instead of a space, it may yield rather than break a tooth.

Claim.—The conical stampers, having radial grooves, for the purpose set forth in the specification.

Also, the yielding tooth, in this connexion, to enable the commencement of the lifting action without damage to the teeth.

No. 11,481.—JOHN GEMMIL.—*Improvement in Radiators.*—Patented August 8, 1854.

Within a radiator A, which may be affixed to any stove or furnace, is suspended a hollow case C, filling nearly the interior space, and admitting of being raised or lowered, so as to regulate the amount of heat to the extent desired.

Claim.—The suspension within a radiating case, substantially as described, of a deflector and regulator, constructed, arranged, and operating substantially as set forth, for the purpose specified.

No. 11,482.—JOSEE JOHNSON.—*Improvement in Brick Machines.*—Patented August 8, 1854.

This improvement consists, *first*, in the manner of operating the plungers which press the clay into the mould.

Secondly. In the method of operating the cut-off which separates the clay in the mould from that in the hopper. The main shaft D, which bears the common mixing arms, (not shown in the drawing,) has also above them an arm or sweep E, and below them two cross-arms *m* and *n* of unequal length. The roller *p* upon sweep E strikes against the upper arm of lever J, which, turning on its pivot *t*, draws the cut-off I over the mouth of the mould. The depression of the angle w^1 of the lever J, throws forward the lever *w* to receive the roller *p*, by which both levers, and consequently the cut-off I, are immediately restored to their former position. The plungers *h*, working in the secondary hopper F, receive their reciprocating motion through links *e*, from cams *a*, upon levers K, said cams being operated by the alternate action of the rollers

r, (or the longer cross-arm *m*,) upon their outer surface *i*, and that of the roller *s*, (or the shorter cross-arm *n*,) upon their inner surface *a*.

Claim.—The combination of the double cam or cams *a* at the end of the lever or levers K, and attached to and acting upon the plunger or plungers by a link *e*, with the cross-arms *m* and *n*, and their friction rollers *r* and *s*, arranged and operating substantially as, and for the purpose, above set forth and described.

I further claim, for the purpose of operating the cut-off, the combination of the two levers J and *w* with the friction-wheel *p*, or their equivalents, at the end of sweep E, as set forth and described.

No. 11,483.—DANIEL KNIGHT.—*Improvement in Fire-Arms.*—Patented August 8, 1854.

This invention and claim consist in the horizontal sliding-hammer H I, constructed as described, and combined with the operating mechanism *m n o p q*, which constitutes the trigger, in combination with the barrel A, which has the nipple in its breech, when said barrel is arranged forward from the hand of the shooter in front of the protection-shoulder formed by the tube C F at *b*, substantially as, and for the purposes, set forth.

No. 11,484.—WILLIAM H. MERIWETHER.—*Improvement in Spring-bottoms of Bedsteads.*—Patented August 8, 1854.

This invention consists in crimping the wire as shown at *a a*, and in this state stretching the same back and forth between the head and foot blocks *b c* of the bedstead frame.

Claim.—The spring-bottom construction of zig-zag wire, arranged and constructed in the manner and for the purposes set forth.

No. 11,485.—J. MERRILL and G. PATTEN.—*Improvement in Condensers.* Patented August 8, 1854.

Claim.—1st. The improved refrigerator or water-cooling apparatus, consisting of the concentric tubes, and the chambers *l l* above and below them, whereby the condensed steam or hot water is conducted into annular spaces *p p*, etc., separated into thin films, and brought in contact on both sides with cold surfaces, the cold water or cooling medium passing through one set of pipes *i i*, etc., and around the others *o o*.

2d. Providing a separate vessel or receptacle through which the injection-water drawn from the condenser by the air-pump is made to pass before entering the refrigerator, so as to permit the oil to be separated or drawn off.

No. 11,486.—JAMES S. MCCLELLAND.—*Improvement in Buggies.*—Patented August 8, 1854.

This invention consists in arranging the body upon spring couplings in such a manner as that additional pairs or sets of springs shall come into action as the weight is increased on the body, and this in combi-

nation with the fastening of the body forward of its centre to one set of springs *a a*, and in the rear of its centre to another set of springs *b b*, so that the body may have a rocking motion transversely, and the tendency of the body to yield at one point be counteracted by its lifting the spring in another point, substantially as described.

No. 11,487.—JOHN MCMURTRY.—*Improvement in Brick Machines.*—Patented August 8, 1854.

This machine consists of two mould-cylinders B B^1 with moulds *a* and discharging-pistons *b*, placed radially. Between them is a reciprocating plunger-rod E, upon the heads C C^1 of which are plungers *e* e^1. The cylinders are revolved at the proper time by the action of the plunger-heads C C^1 upon the arms *i i* of the bar I, which operates the pawls *h* h^1, as shown in the drawings. The cylinders are locked to receive the pressure by the entrance of catches *g* g^1 (actuated by spring *l*), with the notches *k* upon the periphery of the cylinders, said catches being drawn out of the notches on the retreat of the plunger by the hooks *m* m^1.

Claims.—The combination with one or more such mould-cylinders B B^1, having moulds arranged, as described, of as many plunger-heads C C^1 and plungers *e* e^1 as may be desired; said plunger-heads being arranged to work radially to the cylinders, and operated by any suitable means, whereby they are caused to compress the clay in the moulds, substantially as herein set forth.

2d. Arranging two mould-cylinders B B^1, such as are described, parallel with each other, and placing between them two plunger-heads C C^1 attached to the same rod E, or otherwise arranged so as to work in a line or plane passing through the axles of both cylinders, and thereby to cause one to advance towards its cylinder to compress the clay in one or more of the moulds, as the other recedes from its cylinder after a similar operation, substantially as herein set forth.

3d. The method, herein described, of giving motion to the mould-cylinders during the receding movements of their respective plungers, by means of the toothed-wheels J J^1 upon the cylinders, the levers H H^1, or the cylinder-shafts and their pawls *h* h^1, and the coupling-rod I, which has arms *i i* with which the plunger-heads C C^1 come in contact at a proper time during their movements; the whole being combined and operated as set forth.

4th. The method of locking the cylinders during the advance of their respective plunger-heads, and of setting them free to turn during the receding thereof by means of the catches *g* g^1 attached to the frame, the hooks *m* m^1 connected with the plunger-heads, and a spring *l* applied to the catches; all combined and operating substantially as herein described.

No. 11,488.—STANISLAS MILLET.—*Improvement in Sofa Bedsteads.*—Patented August 8, 1854.

The nature of this invention consists in combining with a spring bottom a sagging-bottom G, laced to a hinged head and foot piece F, so

that when used as a bedstead the sagging-bottom shall be strained over the spring-bottom by the dropping of the head and foot pieces, and when used as a sofa or lounge said sagging-bottom shall form the ends of the sofa within the frame, and serve as a lining, and support the mattress.

Claim.—In combination with a spring-bottom, such as represented, the attaching of the sagging-bottom to the hinged head and foot board so that said sagging-bottom shall be strained over the spring-bottom when the head and foot pieces are dropped, to form a bed and serve the purpose of a lining between the mattress and the springs when used as a sofa or lounge, substantially as described.

No. 11,489.—N. MILLINGTON and D. I. GEORGE.—*Improvement in Method of Graduating Carpenters' Squares, Rulers, &c.*—Patented August 8, 1854.

The nature of this invention consists in providing (if for the common carpenters' square, two feet long) twenty-four gravers (the drawing represents only six of them) about four inches long, firmly set in metallic handles about twenty inches long, and attached to a rod about one-fourth the distance from the front end of the handles, the rear end being adjusted by screws and springs. These handles are placed side by side one inch apart from centre to centre, and are attached to a carriage about one foot wide and two feet long, which slides laterally (sufficient to make the longest cross-mark) on way O, and is pressed forward to cut the marks by a wheel in the rear, having on its periphery a succession of eight cams, (to divide the inch into eight,) the highest points of each rising to the same plane, but differing in depth, to give the desired length of mark to each of the several divisions of the inch.

Claim.—1st. The arrangement in a single frame, substantially as set forth, of as many gravers as there are units to be divided, so as by the action of the cam-wheel W, or its equivalent, simultaneously to trace, of the proper length, each set of division and fractional lines.

2d. The balance frame V, with its appendages, to equalize the pressure of the spiral springs on the graver-handles *g* so as to give the same depth of mark on the thin as on the thick end of the taper square.

3d. The inclined plane *i*, with its appendages, for moving the square longitudinally and dividing the inch into any desirable number of equal parts.

4th. The carriage *c*, arranged to press the square up against the points of the gravers by a cam or otherwise, all the several parts or their equivalents to be arranged and combined as above specified, or in any other manner substantially the same which shall produce the intended effect.

No. 11,490.—ALEXANDER MOFFITT.—*Improved Spring-Body Carriage.* Patented August 8, 1854.

This invention and claim consist in constructing the body of wheeled carriages of a pair of metal springs, so formed and arranged that the

curved portions (*b b b*) thereof, supporting the seat, shall admit of greater flexion, while their connexion with the horizontal portion (*a a*) of said springs is kept up, thus uniting the hind axle and front bolster as set forth, for the purpose of reducing the weight and expense of construction.

No. 11,491.—SAMUEL NICOLSON.—*Improvement in Wooden Pavements.* Patented August 8, 1854.

This invention and claim consist in so combining and arranging the blocks or wooden portion of the pavement, that there may be cells or channels between them for the reception of tar and gravel, or materials of like character, each cell having a wooden bottom for the cement to rest on, whereby, when the mass of tar and gravel in each cell is pressed down by the wheels of vehicles, it shall be prevented from being forced through the cavity, and be caused to spread in lateral directions, so as to maintain a firm and close joint between the adjacent blocks, and prevent water from passing down between their joints.

The blocks are sawed four and eight inches long, and set up on end and alternating so as to form the cells.

No. 11,492.—CHARLES T. PORTER.—*Improvement in Machinery for Dressing Stone.*—Patented August 8, 1854.

The nature of the first part of this invention consists in attaching the ways rigidly to the rest so as to form a frame, and furnishing the frame, composed of rest and ways, with journals, which fit to suitable boxes *a a* in the main framing of the machine, and serve as pivots upon which the rest and ways swing together, so as to allow of their adjustment to direct the motion of the hammer J in a line at any desired angle to the face to be cut. The object of the second part of this invention is to cause the edge of the tool to be driven by the blow of the hammer, not in the direction of the blow, but in a line or plane parallel, or nearly so, with the surface intended to be produced, and thereby to give a high degree of smoothness to the surface of the stone, and to cause the tool to sharpen itself by its own operation.

Claim.—The employment of a rest H, having its face parallel with the contiguous face of the tool-stock, when the said rest is rigidly attached to the ways G G, in which the hammer and tool-stock work, or forms part of the same frame therewith, and when the frame thus formed is provided with and swings from journals *a a*, which fit in journal boxes, suspended or supported in a suitable manner in the main framing of the machine, so that the ways may be adjusted to different angles of the surface desired to be cut on the stone, without changing the relation of the hammer, the tool, and the rest.

Also, constructing the tool-stock and arranging it relatively to the rest and the hammer, so that it is capable of vibrating substantially as described, to allow the tool resting upon the surface of the stone to be carried back by the feed-motion, and to cause it to be driven by the blow of the hammer, not in the line of the direction of the blow, but

forward in, or nearly in, the line or plane of the surface desired to be produced, as set forth.

No. 11,493.—CHRISTIAN REIF.—*Improvement in Clover-Separators.*—Patented August 8, 1854.

The improvement and claim consist in the arrangement of sieves H and *q*, and endless carriers L and J, in the manner represented by drawing, whereby the clover-seed, after being hulled, is subjected to the action of the fan-blast, in small quantities at a time, sufficiently often to remove all hulls and other light impurities, as well as the impurities of nearly the same specific gravity with it.

No. 11,494.—CHEENEY REED and BROOKS K. MOULD.—*Improvement in Railroad-Car Ventilators.*—Patented August 8, 1854.

The claim sets forth the character of the invention.

Claim.—The method, substantially as herein described, of ventilating railroad cars, by combining with a vessel or apparatus which receives a current of air through a spout or spouts by the motion of the train or any equivalent therefor, and discharges it into the car, substantially as specified, a hollow rotating cylinder, composed of one or more series of slats or other open work, or the equivalent therefor, and partially immersed and rotating in water, substantially as specified; so that, as the air passes through the said cylinder or its equivalent, on its way to the inside of the car, the dust shall be separated therefrom by impinging on the moistened surfaces, whilst the rotation of the said cylinder in water has the effect to wash off the accumulated dust, and to keep the surfaces presented to the passage of the air constantly in a moistened state, substantially as specified.

No. 11,495.—LUTHER ROSS and POTTER G. ROSS.—*Improvement in Machines for Cutting Soles of Boots and Shoes.*—Patented August 8, 1854.

The leading features of this invention consist of an axis A, to which are attached knives B B^1, of the curve necessary to represent the two sides of the sole of the boot or shoe. The leather is fed by means of grooved rollers E and F upon the cylinder D, upon which the knives perform their work.

Claim.—Placing the curved knives upon an axis so that their cutting edges shall correspond to portions of the surface of a cylinder, so that a small portion only of the knives is cutting at any one time, for the purpose of cutting soles for boots and shoes, substantially as set forth and described. Also, driving the feed-rolls E and F by the adjustable wheel G, in combination with the arrangement of the table and guide-rail O, as described, or any other substantially the same.

No. 11,496.—HORACE SMITH and DANIEL B. WESSON.—*Improvement in Cartridges.*—Patented August 8, 1854.

This invention consists in the arrangement of the tallow, the powder, and the percussion-priming, in the cartridge, as shown in the figure; *c* is the tallow, *e* the powder, and *g* the percussion-priming.

Claim.—1st. Arranging the tallow within the cartridge and between the ball and charge of powder, or in a chamber *c* suitably made in the rear of the ball of the cartridge, whereby the necessary amount of tallow for a discharge is preserved with the charge in a convenient and compact form.

2d. The employment in the cartridge of the metallic or indurated disk or seat, so that it shall rest directly on the powder, in combination with arranging the priming or percussion-powder in rear of said disk, or on the side of it opposite to that which rests against the powder, thereby affording the opportunity for applying the force of the blow by which the priming is enflamed, such force being applied in the line of the axis of the cartridge.

No. 11,497.—IRA SMITH and JOHN STONESIFER.—*Improvement in Lard Lamps.*—Patented August 8, 1854.

The compensation of the wearing away of the piston in this class of lamps is here provided for by the insertion of a conical piece of leather, having its base next the axis of the piston, and made to press tightly against the side of the reservoir, in which the follower is moved up and down by means of the screw C and handle D.

Claim.—The improved piston, composed of two adjustable compressing plates *ff*, that embrace between them a disk of leather or other equivalent material, dissected in the manner herein represented and described, to wit: the said disk having an outwardly tapering independent piece *m*, inserted into a correspondingly shaped recess, so that, when the periphery of said piston wears away by use, it may be enlarged by simply loosening its compressing plates, drawing out the said piece *m* a short distance, and then tightening said plates and trimming off to the proper curvature the extremities of the piece *m*, substantially as herein set forth.

No. 11,498.—THOMAS B. STOUT.—*Improvement in Car-Coupling.*—Patented August 8, 1854.

This coupling is self-detaching, (whenever either car is thrown off the the track, and thereby draws the link out of the direct line,) and is at the same time capable of being disengaged by hand when desired.

Claim.—The arrangement of the stop D, springs *b b*, coupling-bolt E, in connection with the ordinary link F, as described, for the purpose of self-detachment of the cars by the end of the bolt E being thrown as set forth. I also claim said stop D, springs *b b*, bolt E, and link F, in combination with the forked lever, operated by the windlass H in the

manner as described, for the purpose of detaching, in safety, a car or cars, at the will of an attendant, while the train is in motion

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No. 11,499.—ALBERT G. SAFFORD.—*Improvement in Window-Sash Springs.*—Patented August 8, 1854.

This invention and claim consist in the arrangement of the slides *c c* and springs *l m* with respect to the window sash and the rectangular groove of the style or jamb of the frame, whereby the two sides of each slide are pressed at once by the springs against the two right-angular sides of the groove, and the sash forced in two directions, and particularly against the weather-side of the groove, said slides and springs acting in lieu of counterbalance weights, and sustaining the sash at any desired elevation.

No. 11,500.—JNO. THOMPSON and A. S. MOORE.—*Improvement in Machines for cutting out Boot and Shoe Soles.*—Patented August 8, 1854. Antedated February 8, 1854.

The general character of this machine is readily understood from the drawings. The vertical motion of the cutter-head M is given by the slide K, acted upon by the pitman I, which is attached to an eccentric pin A upon the main shaft D. The revolution of the cutter-head is produced by the action of the segment R upon the pinion *t*, said segment being operated by the main shaft D, through the pitman I, treadle H, pitman T, and arm *w*, so that, by the proper adjustment of the crank G and eccentric pin *d*, said revolution is made to take place at the proper time in respect to the vertical motion. In order to obtain from the reciprocating revolution of the pinion *t* an intermittent rotation, the pinion *t* is not attached to the shaft *e* of the cutter-head M, but to a cylinder *f*, containing a spring *v*, one end of which is riveted thereto, and which, embracing the shaft *e*, causes it to revolve when tightly coiled around it, but releases it as soon as the pinion *t* reverses its motion. The knives *a* are confined between two curved clamps d^1 and e^1, and attached by screws i^1 to boxes g^1, sliding in mortises f^1 of the cutter-head, so that, by means of the screws h^1, they can be easily adjusted in the plane of the cutter-head.

Claim.—1st. The combination of the sector R and pinion *t* with the cylinder *f* and clamp-spring *v*, operating substantially in the manner described, and for the purpose set forth.

2d. We do not claim the mere adjustment of the crank G and eccentric on the shaft D; but what we do claim is, communicating both a vertical and intermittent rotary motion to the knives from the continuous motion of the fly-wheel E, by the means above set forth, to wit: the eccentrics *d*, operating the vertical slides K which support the cutter-shaft *e*, and the geared cylinder or its equivalent, engaging and disengaging with said shaft, and operated by a sector or its equivalent, the motion of which is derived from the crank G, as shown and described, or by other means substantially equivalent thereto, whereby we are enabled to secure the partial ascent of the knives *a*, before the

commencement of their revolution, by the proper adjustment of the eccentrics *d* to the crank G

3d. Passing the screws i^1, which confine the knives to the cutter-head, through the sliding-boxes g^1, in the manner described; for the purpose of adjusting the knives to different widths of toe and heel, without loosening the screws which confine them to the cutter-head.

No. 11,501.—EDWARD TURNER.—*Improvement in Fastenings for Hames.*—Patented August 8, 1854.

In the figure, A represents a curved piece of metal provided with a hook B at one end, which hook is intended to be inserted in the ring upon the end of the hame, and the end B^1 of the hook bent down into the recess C, and fastened by riveting or otherwise. The piece A has the groove D in it, to which the curved rack or sliding-piece E is fitted so as to traverse freely; and this curved rack is provided with a hook F, bent down upon the projection G, and fastened by riveting. The sliding-piece E has a groove H in it for the end of the spring M, which spring is riveted to the rear end of the pawl J, and this pawl serves to hold the piece E in the piece A very firmly, by means of the notches I I.

Claim.—The curved rack, fitted to traverse in a groove provided with a vibrating catch operated by a spring, substantially as described.

No. 11,502.—PHILOS B. TYLER and BENJAMIN LATHROP.—*Improvement in the Rollers of Furniture Casters.*—Patented August 8, 1854.

Claim.—We do not claim the metallic caster-roller as exhibited in figure, but we do claim the improved caster-rollers made both externally and internally as denoted in transverse section—that is to say, with a bended rim united to an annulus or disk, made flat for some distance from the rim towards the hub, the bended rim and flat disk producing a saving of the usual amount of metal which would have to be employed in the angles between them in order to insure the requisite strength and stiffness to the roller.

No. 11,503.—WILLIAM WICKERSHAM.—*Improvement in Self-heating Smoothing-Irons.*—Patented August 8, 1854.

Claim.—The making of the handle D, in part or in whole, the reservoir for containing the combustible fluid, as specified. Also, I claim combining with the bottom of the flame chamber one or more connections or columns I I, extending therefrom, and for the purpose of intercepting heat and conducting it downwards into the bottom of the flame chamber, substantially as specified.

I do not claim the mere application of a non-conducting material to a surface in order to prevent the escape of heat therefrom; but I claim the non-conducting material arranged on the top of the iron in combination with conductors leading from the top of the flame chamber down

to the bottom of said flame chamber, by which combination, as specified, the surplus heat in the top of the flat is saved and conducted into the bottom of the iron as described.

No. 11,504.—HENRY E. WOODBURY.—*Improved Document File or Holder.*—Patented August 8, 1854.

The object of the inventor is to have a convenient and compact receptacle for folded documents, where they will be preserved from injury and be easily referred to when desired. It consists of a box or drawer A, within which is a loose holder or platen B, attached to one end of a spring C; the other end of the spring is attached to the back of the box A; and the whole, including the papers, are covered by a lid D, as represented.

No. 11,505.—PETER MIGGETT.—*Improvements in Shuttle-guards.*—Patented August 8, 1854.

Claim.—The shuttle-box guard, constructed, as specified, of rollers C C on either side of the centre longitudinal line of the shuttle, and projecting from a spring-bar or holder B down into the box, whereby the shuttle is more effectually restrained from rising at the end next the warp on leaving the box, thus preventing the shuttle from flying out of the loom, or more truly inclining it to run in its own course, friction is diminished, the shuttle less exposed to injury or wear, and kept from turning or entering the opposite box edgewise.

No. 11,506.—LEROY S. WHITE, assignor to P. D. TYLER and B. LATHROP.—*Improvement in Furniture Casters.*—Patented August 8, 1854.

Claim.—I do not claim making the shank of the caster detachable from its socket, nor do I claim the employment of a spring to hold it in the socket, nor the arrangement of said spring in the socket made without a groove; nor do I herein claim the arrangement of the sustaining groove of the spring in the socket, instead of in the shank, so that when the shank is being drawn out of the socket, or when it is within or out of the same, the spring will remain in the socket.

But what I do claim is the hereinbefore described mode of arranging or applying the spring *g* and the sustaining groove *c*, or recess thereof, to the socket tube A and the shank B; the sustaining groove of the spring being formed in the outer surface of the socket-tube, and the spring being made to embrace the socket-tube, and project through it and into the groove of the shank, all substantially as hereinbefore specified.

No. 11,507.—ALFRED SWINGLE, assignor to ELMER TOWNSEND.—*Improvement in Sewing Machines.*—Patented August 8, 1854.

Claim.—The combination of the rotary fork thread-carrier P and the hook G, as made to operate in connection with the needle A, and perform sewing substantially as described.

No. 11,508.—JOHN NORTON.—*Improvement in Blasting Rock, Timber, &c.*—Patented August 8, 1854.

This invention consists in a slight modification of the well known means of blasting rock, timber, &c., by the application and use of a frictional cord, divided into two parts and slightly spliced together, in combination with an inflammable compound, with which the splice is covered, for the purpose of igniting the charge when the cord is pulled asunder. Also in the "safety bridle," which is attached to the frictional cord, or to the frictional cork, for the purpose of preventing accidental discharge.

Claim.—1st. The frictional cord, divided into two parts and slightly spliced together, in combination with an inflammable compound with which the splice is covered, substantially as described, and for the purpose specified.

No. 11,509.—AMOS J. SAXTON.—*Improved Mode of Constructing Iron Buildings.*—Patented August 8, 1854.

This improvement consists in the peculiar method of securing all the sectional parts of iron-frame fire-proof houses by means of a system of compound joints, which are modified to suit the particular connection desired, thereby dispensing with the use of screws, rivets, bolts, or nails, in the erection of iron-frame fire-proof or other buildings.

Claim.—1st. The mode of connecting and combining all the different points by all or any of the improved compound joints, as shown and described.

2d. The mode of erecting iron fire-proof and other fire-proof buildings, and of uniting each substantial part to another at all the sectional points by means of the improved compound joints, as described.

3d. The method of arranging, combining, and uniting all the different parts of the columns, girders, beams, ashlers, and interior plates, or any of the sectional parts of the building thus united by the compound sectional joints, by which the whole is formed into a substantial iron-frame fire-proof building, as described and shown.

No. 11,510.—WEATHERILL TAYLOR.—*Improvement in Ship-Blocks.*—Patented August 8, 1854.

The improvement consists in fitting the flange *b* of the bush into a recess in one side of the sheave, and a bevelled-edge ring *c* into a recess on the opposite side of the sheave, and then swaging the end of the bush into the bevelled-edge ring.

Claim.—Securing the bush to the sheave by fitting the flange into the recess on one side of the sheave, and the bevel-edged ring into the recess on the opposite side of the sheave, and swaging the bush on to the bevelled edge of the ring, as herein set forth.

No. 11,511.—S. W. Ruggles, assignor to S. W. Ruggles and A. R. Smith.—*Improvement in Fan-Blowers.*—Patented August 8, 1854.

This is an improvement on those fan-blowers which receive currents of air from two directions diametrically opposite, and has for its object the prevention of the humming due to the meeting of the-air currents within the partial vacancy.

Claim.—The application of a deflecting rib to the middle of, and so as to extend beyond, the propelling surface of each of the curved wings of the blast wheel, and formed so as to deflect the currents of air entering the wheel laterally in the opposite directions, and prevent them from that contact or impulsion against one another, which produces the humming or buzzing noise, as above set forth.

No. 11,512.—James A. Bazin, assignor to Alfred B. Ely.—*Improvements in Braiding Machines.*—Patented August 8, 1854.

This invention consists in the use of a movable guide-plate, by which the motions of the bobbins are governed, the guide-plate being operated by the bobbins, by means of which much friction is avoided; and also improvements in the details of the machinery.

Claim.—The movable guides D D^1, constructed and operated in the manner substantially as described.

Also, the method of constructing the bobbin-holder, the parts which carry and guide the threads being connected with the stem N by means of spring *f*, which enables the bobbins to yield without permitting the strand to render too freely.

Also, in combination with the method of constructing the bobbin-holders, the method of drawing off the finished braid over the spring-plate Z.

Also, the disk S, operating substantially as described.

Figure 4 is a section, on an enlarged scale, of the part of the bobbin-holder which is immediately below the spools.

No. 11,513.—Robert Arthur.—*Improvement in Bottles, Jars, and other similar Articles.*—Patented August 15, 1854.

In the figure, *a* represents the bottle, *b* the neck, which is surrounded by a fillet *c* to form a groove round the neck of the bottle. This groove is narrow at the bottom *n*, wide at the top, and the upper edge of the fillet is curved inwards, to form an inverted channel *o*, into which any fluid within the groove retreats when the bottle is inverted, and returns again to the bottom when the bottle is placed in an upright position, bottom downwards. The stopper or cap enters the narrowest part of the groove, displacing the liquid or other yielding material therein, and thus preventing the passage of air to or from the interior of the bottle.

Claim.—The vessel so contrived as to be made tight by means of a groove or receptacle containing a yielding medium, which is to be penetrated by the cap or cover, with the receptacle so contrived that the

bottle may be inverted to pour out its contents, without spilling the liquid or yielding medium from the groove or receptacle, as set forth.

No. 11,514.—JOHN A. BRADSHAW.—*Improvement in Pegging Machines for Boots and Shoes.*—Patented August 15, 1854.

The various devices involved in this machine are principally actuated by cams upon a horizontal revolving shaft. The shoe being pegged is caused to move round beneath the awl and peg, driven by the awl before it is withdrawn from the sole. In the figure, B represents the main driving-shaft; D is the hopper into which the pegs are put ready for use; E is a grooved wheel which receives the pegs from the hopper and carries them over to the channel F; K is a swipe, which by the operation of the lever H arranges the pegs in a direction parallel with the groove in the wheel E; L is a small burr-wheel, revolving in a direction opposite to that of the grooved wheel E, and situated immediately over said groove to prevent more than one peg from passing at the same time. After passing through the channel F, the peg drops down between the belt N and pulley O, and by these it is carried round, and by the operation of lever P is thrown into the hole in the tube Q, which conducts it to the cells in the rim of the wheel R; and as the cells in this rim are filled up (each cell receiving one peg) the wheels turn round and drop each peg in turn into the tube S; from the lower end of the tube S it is received by a clamp W, which presents it in a horizontal position to the action of one of the two reciprocating rods *z z*, which strikes it, and pushes it point first through one of the detectors *b b* into one of the channels *c*, the detectors being so constructed that if the peg is directed head-foremost the detector cannot receive it, but the spiral spring which actuates the punches or rods *z z* gives way, and the peg remains in the clamp until the other punch or rod returns, carrying the peg into the opposite channel *c*. The channels *c c* are united at the bottom, and the peg falls point first into the cells perforated into the wheel *d*, which, as it revolves, brings the cells successively over a hole in the circular plate *g* beneath the wheel *d*, and the punch *h* pushes it between the forceps *k*, and then withdraws to allow the wheel to pass on again. The peg is now in a position ready for use. The awl and the hammer are both mounted on the same carriage with the forceps *k*, and they all swing together over the article to be pegged. Parallel motion is given to the surface of the sole of the boot or shoe which is being pegged, by a combination of levers, rods, and hinge-joints.

Claim.—The combination with the grooved wheel E, of the arm K, for the purpose of presenting the pegs to the wheel longitudinally, arranged and operated substantially as set forth and described. Also, the application of the grooved wheel E in combination with the burr-wheel L and tube F, substantially as, and for the purpose, set forth and described. Also, the lever T^1, pawl U^1, and ratchet V^1, on grooved wheel E, or their equivalent, arranged and combined substantially as, and for the purposes, set forth and described. Also, the clamps or forceps W, to receive the peg from the wheel R, in combination with the

detectors *b b*, the punches *z z*, and the double channel *c*, for the purpose of insuring the proper presentation of the peg with the point downward. Also, the combination of the forceps *k*, the wedge-shaped drivers S, and the adjustable stop-screw Y^1, substantially as, and for the purpose, set forth and described. Also, the apparatus for holding the boot or shoe during the operation of pegging, consisting of the plate C^1, revolving upon the ring B^1 of the plate A^1, and having the clamps D^1 D^1 D^1 D^1, or their equivalents, the whole being arranged substantially as, and for the purpose, set forth and decribed. Also, the combination of the hinge-joints I^1 I^1, the shaft K^1, and the levers J^1 J^1, or their equivalents, substantially as, and for the purpose, set forth and described.

No. 11,515.—William Brooke.—*Improvement in Moulds for Glass Insulators.*—Patented August 15, 1854.

This improvement consists in the attachment of an adjustable shoulder g^1 to the cap *g* of the mould, against which the molten glass is forced up by the descent of the plunger *h*, so that the exterior form of the insulator may always be secured, provided a sufficient quantity of metal be put in the mould.

Claim.—The shoulder g^1, when used in combination with the cap-plate *g* and plunger *h*, in the manner and for the purposes set forth.

No. 11,516.—John H. Cahill.—*Improvement in Hot-Air Ranges and Elevated Side Ovens.*—Patented August 15, 1854.

Claim.—1st. The use of the fresh hot-air pipe when constructed and combined with the hot-air chamber and elevated side oven and vent-hole, especially for the purpose of preventing the fumes and vapors (arising from the substances being cooked in the oven when in operation) from being drawn or forced out of the oven into the hot-air chamber as described.

2d. Making the elevated side-oven flues of square section, and united together by the partitions as described, so as to have equal and flat surfaces in the oven and hot-air chamber, and arranged so as to radiate heat therefrom on all sides of the oven excepting the door-side, and also so as to radiate heat into the hot-air chamber from the flues on four sides of the oven, substantially as described.

No. 11,517.—Matthias P. Coons.—*Improvement in Railroad-Car Brakes.*—Patented August 15, 1854.

Claim.—I do not claim any particular device, or the construction of any plan of leverage for the purpose of operating the brake, as that may be accomplished by various modes. But what I claim is a lever-form of brake, which, when in action, shall bear and brake simultaneously, both upon the wheels and rails, the friction upon the latter supplying the breaking force upon the former, and the whole being adjusta-

ble and self-acting through the combined agency of an eccentric or cam-bearing or resisting point between the brake and car, substantially as described.

No. 11,518—Aaron D. Crane.—*Improvement in Machines for Turning Irregular Forms.*—Patented August 15, 1854.

The patent is for the cutter-wheel C, so arranged that the pattern or guides R and I govern the motion of the cutters, throwing them outwards or inwards from the article A to be cut, while the carriage F is drawn longitudinally by a feeding-screw.

No. 11,519.—D. M. Cummings.—*Improvement in Rake.*—Patented August 15, 1854.

This invention consists of a metallic socket *c* and clasp *d* in one piece; the former to receive the handle, and the latter to embrace the head, in connexion with screw D, which transfixes the head.

Claim.—The mode of fastening the head of the rake to the handle by the use of the head-fastener C, containing the socket *e* and the clasp *d*, in combination with the handle A, head B, and screw D, as above described, and for the purposes above set forth, or any other mode substantially the same and which will produce the intended effect.

No. 11,520.—B. Franklin Day.—*Improved Hand Press.*—Patented August 15, 1854.

This is constructed for a seal-press, and the claim is for the arrangement of levers E E, toggles G G, and follower F, as represented; so that, by grasping the handles of the levers, the operator can depress the platen on the bed C, with great convenience and power.

No. 11,521.—Cook Darling.—*Securing Carriage Wheels to Axles.*—Patented August 15, 1854.

This invention consists in the peculiar combination and arrangement of old devices, by means of which the wheel is put on or taken off with great facility and promptness; *d e* are the guard-plates, which fit into a recess cast in the face of the circular plate *a b c*, and so constructed as to move easily therein, and to be kept closed on the axle when in place, by the arched plate spring *m*; *f* is the conical end of the axle, which forces the guard-plates apart when it passes through the elliptical orifice between them, when the wheel is put on the axle, and which retains the wheel in place when the guard-plates have closed into the groove turned on the axle behind the conical end *(f)*; *p* is the pintle on which the key (fig. 2) turns when it unlocks the connexion between hub and axles; and A is the cap which covers and secures all these parts. The key is used to take off the wheel without removing the cap (A), and the wheel is put on by merely using a little force to press

it home to its place, the conical end of the axle separating the guard-plates until it has passed into them, when they close upon it and secure it.

Claim.—The combination and arrangement of the several parts, viz: The axle with the conical end, the guard-plates, and the means of operating the same by the use of the key in front.

No. 11,522.—Aaron L. Dennison.—*Improvement in Punches for Making Watch-hands.*—Patented August 18, 1854.

The claim allowed is to the construction and arrangement of the punch H H and die, in the manner shown, the punch being of elementary parts, formed to the same figure, or nearly so, in their cross-sections, throughout their whole depth, and braced between blocks or clamps made to the figure of the article to be formed; by which construction the most delicate and complex punch can be formed in a cheap and expeditious manner, and readily renewed or changed; and being throughout of the same magnitude, are readily and perfectly hardened without injury, which has heretofore been found an insuperable difficulty in punching small, delicate work.

No. 11,523.—Joshua Gibbs.—*Improvement in Ploughs.*—Patented August 15, 1854.

This invention is described by the claim, as follows:

Claim.—Making the working surface of the mould-board in the form of a section of the interior surface of a hollow cylinder; the centre or axis of said cylinder being parallel, or nearly parallel, horizontally to the base of the mould-board, or bottom of the plough, substantially as described.

No. 11,524.—Joseph Harris, Jr.—*Improvement in Lamps.*—Patented August 15, 1854.

The supply of air for keeping up the combustion at the inner surface of the wick is brought, by the apertures F F, through the tubes A B, the former tube being closed below, thus avoiding danger which might arise from heating the fluid. The slide-tube B, for increasing and decreasing the light after being adjusted, is kept in a fixed position by a slot and pin.

Claim.—The arrangement and construction of the lamp, as herein described.

No. 11,525.—Albert H. Judd.—*Improved Safety-Gauge for Steam Boilers.*—Patented August 15, 1854.

The nature of the invention is shown by the following claims allowed:

Claims.—1st. Passing the stem of the valve through an enlargement *c*, in its supporting-tube B; by which I am enabled to give short bear-

ings to the stem, for the purpose of preventing it becoming fastened in its bearings by oxidation, or the action of heat upon the earthy matter driven through it when the valve is open.

2d. Removing portions of the sides from that part of the valve-stem which passes through its inner bearing aperture, so as to leave narrow bearing-surfaces to guide and steady the valve.

3d. Combining the valve-stem with the float, in such manner that when the float shall sink and open the valve, the valve-stem may be detached therefrom for the purpose of again closing the same, by giving a partial turn to the valve-stem by means of its handle *d*.

4th. Giving an alarm by placing a plug *m*, of fusible alloy, in an aperture in one end of the float, which is connected with my improved arrangement of gauge-cock.

No. 11,526.—J. L. LORD.—*Improved Grindstone Frame.*—Patented August 15, 1854.

This patent is for constructing the frame with two pieces, A A^1, of cast-metal, so that when they are put together, and held by the bolt *b*, they shall furnish the bearings for the shaft *d* and friction-rollers *c*, both of which shall be protected from injury, and dust or water, &c.

No. 11,527.—THOMAS G. MCLAUGHLIN.—*Improvement in Railroad-Car Brakes.*—Patented August 15, 1854.

Claim.—I am aware that many of the devices herein described are well known and in common use, particularly that portion which relates to the operation of the brakes by hand—I therefore do not claim them. But what I do claim as my invention is a sliding-rod, of the peculiar form herein described—that is to say, I claim forking the sliding-rod in such manner as not to interfere with the ring-joints and bumpers, but to have a longitudinal motion separate from, and independent of, both.

Also, I claim the slotted connecting-rods attached to the sliding-rod, for causing the automatical action of the brakes without interfering with the ordinary hand-brake, or the hand-brake in its action interfering with or producing any movement of the sliding-rod, substantially as specified.

No. 11,528.—JACOB MYERS.—*Cultivator.*—Patented August 15, 1854.

This invention consists in putting a triangular ring *f* upon the tooth C, and in setting the land-side of said wing obliquely to the line of the draught, so that the heel of said land-side shall be nearer than the point to the land, in order, by the tendency of the plough from the land, to prevent cutting (by the point or other part of the land-side) the plants standing on the land.

No. 11,529.—ROBERT NEISCH.—*Improvement in Lime-Kilns.*—Patented August 15, 1854.

The main features of this invention consist in the introduction of air from above the hearth and fire-chamber to supply or aid combustion, and in the combination of an arched fire chamber with an inclined and curved hearth, for reflecting and concentrating the heat. The heat arising from the burned lime-stone lying in the bottom a^1, and the air which may find its way through the doors *a*, are carried up through the flues *b* b^1, underneath the grates or hearth, and these furnish heated air to promote combustion. The first series of flues *b* b^1 terminate in the ash-box *c*, and then branch off, as seen in the figure, and lead to the fire. When the lime is drawn from *a*, the flues *b* b^1 may be closed up so as to prevent the admission of cold air to the fires, the object being to cause the air to come in contact with the heated gases before reaching the fires.

Claim.—In combination with the fire-chamber *f*, the air-conducting passage *g*, for the purpose of bringing the air from above, as described. Also, in combination with the arched fire-chamber *f*, the inclined and curved hearth *e*, for concentrating the fuel, and throwing the flame or heat towards the stack, substantially as described.

No. 11,530.—ANDREW PATRICK.—*Improved Mode of Unloading Coal and Other Cars.*—Patented August 15, 1854.

This invention consists in a combination of a lever *b*, and pin *a*, and tilting-frame, so arranged that when the car is run upon said frame, it is held by a hook formed by an iron bar, which bar also raises the lever *b*, and liberates the pin *a*, thereby facilitating the unloading the mine cars.

No. 11,531.—SYLVESTER H. ROPER.—*Improvement in Sewing Machines* Patented August 15, 1854.

Claim.—The groove or thread-passage V V^1, in combination with a needle made to operate a thread, as described; said passage being for the purpose of supporting the thread and preventing it from kinking, or injuriously springing back or towards the cloth immediately after the release of the thread from the needle. Also, the mode of applying the closing-slide *f* to the needle—that is, making the shank of the needle tubular, and inserting the closing-slide within the same, whereby the closing-slide is better protected from accident, or being broken by clutching in the cloth or thread.

Also, in combination together and used with a hook needle, the two thread-benders *n o*, as made to operate on the thread, and lay it in the opening of the needle.

Also, in combination with the thread-benders, the lip or nipper a^2, and the spring-nipper b^2, the same being for the purpose of seizing the thread, and enabling the needle to draw it closely into the cloth.

Also, the mode of connecting the two connecting-rods O P to one

crank-pin A, viz: by the projections *a a* from the rod and the covering tube or ferule *b*.

No. 11,532.—JACOB C. ROBIE.—*Improvement in Turn-Tables.*—Patented August 15, 1854.

Claim.—What I claim as new is:

1st. Balancing the platform of the turn-table upon a transverse central shaft E, or other suitable axis, resting upon the roller-carriage in a line intersecting the line of the axis upon which the turn-table rotates, in such a manner that the table, when in a horizontal position, is elevated, or has its rails above those of the track, to admit of the free swing of the table over its under-supports or bearings N, and so that the table may be rocked with facility from its centre or tilted, to bring the ends of its rails on either side of its balancing-shaft into line or level with the rails of the track.

2d. I also claim the manner, herein described, of holding the table steady at a horizontal set while rotating, and tilting or depressing it on either side of the balancing axle E, when required, by means of the cams M M^1, arranged to bear upon the roller-carriage, and operating in connexion with the roller-carriage and table, as herein set forth.

No. 11,533.—O. L. REYNOLDS.—*Improvement in Machines for Cutting Irregular Forms.*—Patented August 15, 1854.

This arrangement is intended to make shoe-lasts, spokes, etc., and consists of a horizontal cutter-wheel E, supported on a series of rotating and longitudinal reciprocating patterns *d;* the blocks *e* having a corresponding longitudinal motion with the patterns.

Claim.—Combining a series of patterns *d d*, and the chucks for the blocks *e e*, with each other, and with the collar, the vertical slides, the pawls, the ratchet-wheels, and the recess in the arms, or their equivalents, in such a manner that said series of patterns and blocks shall have corresponding compound rotary and longitudinally reciprocating movements imparted to them, substantially in the manner and for the purpose herein set forth.

Also, supporting the weight of the cutter-wheel E upon a series of rotating and longitudinally reciprocating patterns *d d*, when said patterns are combined with chucks for a series of blocks *e e*, in such a manner that corresponding movements shall be imparted to said patterns and blocks, and said blocks be so situated as to be operated upon by the cutters *l l*, substantially in the manner and for the purpose herein set forth.

No. 11,534.—CHARLES G. SARGENT.—*Improvement in Machines for Combing and Stapling Wool.*—Patented August 15, 1854.

Claim.—Drawing out and stapling the material as set forth, previous to commencing the combing operation.

Also, the continuous motion of the nippers c^1 d^1, *M*, or other parts which operate upon the wool, whereby I am enabled to keep a number of them in operation at the same time, the different steps in the process proceeding simultaneously upon the different portions of the material, without the necessity of interrupting any one of them for the performance of another, and without retrograde motion of any of the parts of the machine.

Also, the method described of opening and closing the nippers by means of the cam O, in combination with the cam Q, or its equivalent; whereby the nippers are closed suddenly upon the wool, whatever may be the rate of motion of the nipper-cylinder C.

No. 11,535.—GEORGE SPENCER.—*Improvement in Railroad-Car Windows.*—Patented August 15, 1854.

The nature of this improvement consists in arranging a circular window (capable of rotation) with a small segment open at the forward part, the object being to allow of ventilation without admitting dust, etc.

Claim.—I do not claim as original the establishment of an outward current from within the car, nor that this result is peculiar to my construction of a car window; neither do I claim the use of deflectors in any form whatever, as none are attached by me to any part of the car. I am also aware that circular windows to be revolved, and having their bearing at the centre, have long been known and used to ventilate churches and other public buildings. But whenever these windows are opened to the smallest extent, the opening reaches from the circumference to the centre, and could not therefore be used to accomplish the objects for which my window is intended; I therefore disclaim the original invention and application of a circular revolving window, and also the bearing upon which it is revolved. What I claim as my invention is the combination with the side of a car of a revolving window, consisting of two separate semi-circular sashes connected by hinges, so that one sash may be opened to its full extent, and having a small part of the circle cut off, so that by revolving it upon its centre, a small opening may be made at the forward part of the window, whichever way the car may be moving, the residue of the window remaining at the same time covered.

No. 11,536.—WILLIAM A. SWEET.—*Improvement in Fire-Arms.*—Patented August 15, 1854.

This improvement consists in the devices for opening, closing, and locking the breech-pin B; in the arrangement by which the gun may be cocked, either by the action of the lever C or by the hand, independent of said lever; and in the peculiar mode of taking the exploding cap from the nipple, and of replacing the fresh cap upon said nipple.

Claim.—1st. Producing the compound longitudinal and vibrating movement of the breech, and afterwards immovably securing it in contact with the barrel by a single forward and return motion of the actu-

ating lever C, viz: by means of the cam-piece H, provided with a shoulder *c*, a cam-surface *d*, and a wedge-surface *f*, against which said lever acting successively, substantially as described, produces respectively the backward longitudinal and vibrating motions of the breech, then the forward longitudinal motion thereof, and finally presses it against the barrel with increased force.

2d. The link *i*, one end of which is hinged to the lever C, and the other end provided with a slot *k*, that receives a pin *j* on the hammer-dog *h*, when arranged and operated as specified and shown, for the purpose of cocking the gun by the action of the lever C in operating the breech, while at the same time the hammer remains free to be raised by the hand without moving said lever.

3d. The arrangement of a broad cavity in the face of the hammer, with a sharp edge *o* on its rear side, in combination with the compound movement of the breech, and the properly regulated motion of the hammer, substantially as shown, for the purpose of removing the exploded cap from the nipple.

4th. The combination of the mouth-piece S, attached to the extremity of the feeding-tube I, and provided with a notched tongue *v* projecting forward from one side, and of the short tube T, which is held in front of said mouth-piece by a spring *u*, and has a wedge-shaped projection *z*, extending forward from the side opposite to the tongue; the whole being situated and arranged in such a manner as to relieve the nipple, and supply it with a cap whenever the breech is fully opened, substantially as specified.

No. 11,537.—I. T. and L. J. WAIT.—*Seed-Planters—Cotton.*—Patented August 15, 1854.

The peculiarity of this planter consists in the use of two wheels, I and J, of different size, and on separate axles, R K and H, instead of complicated gearing. Axle K has a series of pins, L, to stir the seed in the hopper, and axle H carries a burr E, to prevent the seed from clogging in passing out of the hopper.

Claim.—Making one wheel larger than the other, and putting them on separate axles, so as to make one operate the burr or apparatus which stirs the seed, and the other the burr or apparatus which delivers the seed, without the aid of gearing or other equivalent devices, substantially as described.

No. 11,538.—MOSES D. WELLS.—*Horse Rake.*—Patented August 15, 1854.

The novel feature in this rake is the employment of three friction-rollers *m n* and n^1, the first working under lever D, and the other two upon teeth *x x*, to facilitate the release of the teeth in discharging hay from the rake.

Claim.—The herein described method of regulating the action of the rake-teeth by the reverse anti-friction rollers *m n* n^1, arranged and operating substantially as herein fully set forth.

No. 11,539.—TIMOTHY U. WEBB.—*Improved Mode of Insulating Lightning Rods and securing the Insulators.*—Patented August 15, 1854.

The improvement in the construction of insulators which I claim, consists in making the inner surface convex, as represented at A C. This, with the outer conformation represented by the drawing, presents a circular surface both inside and out, making the thickness of the insulator uniform in all parts; a conformation which combines the greatest strength with the greatest economy of material, and, by having the least possible amount of surface in contact with the rod, and opposing the least possible resistance to the passage or expansion of air produced by the lightning, renders less liable to be broken by the lightning or any other cause.

Claim.—I do not claim making the outside of the insulator with a horizontal groove in the middle and a flange on each side of the groove. But what I do claim is, making the inner surface convex, in the manner and for the purpose specified.

No. 11,540.—WILLIAM A. WHITE.—*Process for Printing Long-napped Fabrics.*—Patented August 15, 1854.

By means of teasels or brushes the long nap of white cotton or other cloth is combed in a contrary direction to that in which it was laid originally; then by means of blocks the surface is printed in the various colors and patterns desired; when dry, the nap is returned to its original position, and the pattern and colors are found to be agreeably softened and blended together. No illustration.

No. 11,541.—ATKINS S. WRIGHT.—*Improvements in Machines for Amalgamating Gold-Bearing Ores with Quicksilver.*—Patented August 15, 1854.

Claim.—The method described for amalgamating gold in hollow revolving cylinders upon horizontal axes, said axes, journals, or trunnions, being hollow to admit the pulverized quartz in ore from one cylinder into another, the inlets through the turnings being smaller than the end of the outlet; the said cylinders connected by flanges or S pipes with grooves turned into the axes or trunnions, and rings fitted into the grooves and covered by the flanges; the whole being so connected as to make them water or steam tight, and so arranged as to give a fall of about six inches to each cylinder, said cylinder containing rollers, knives, burnishers, and other analogous arrangements to produce friction, scour the ore, and produce the amalgam with quicksilver, the whole arranged and combined substantially as set forth.

No. 11,542.—WILLIAM KIDDER.—*Improved Machine for Pegging Boots and Shoes.*—Patented August 15, 1854.

This machine is intended to be used in the left hand of a workman, who while grasping it by its handle and holding its feeding-wheel S

in contact with the edge of a sole to be pegged, while the bottom of the handle is made to rest on the top surface of the sole, strikes with a hammer held in his right hand upon the top of the awl driven on the carrier, so as to impel it downward. During the act of forcing the awl-carrier downward a peg is separated from a strip of peg-wood and is carried downward and driven into a hole previously made by the awl; at the same time the awl is driven into the sole, and makes a hole for the next succeeding peg. During the elevation of the awl the machine is fed or moved along the distance necessary to bring over the awl-hole the next peg to be driven. A exhibits the handle, which is made of metal and has a chamber B in it, in which is arranged the awl-driver C, armed with an awl D. The awl-driver also carries the peg-driver E, which is partially surrounded by the peg-carrier F, which is a small spout sliding on the peg-driver and against the spring G coiled around the awl-driver. The strip of peg-wood is carried forward over the knife-edge M by means of one or more springs N O.

Claim.—The combining with the handle of the machine, and the machinery for driving the pegs, a feeding mechanism, by which, under the movement of the awl-stock, the feeding or regulating of the feeding of the machine along on the sole is effected.

Also, the combination of mechanism by which the feeding of the machine is regulated, while the machine is held in the hand and pressed against and along on the edge of the sole, as stated; the said combination being the serrated wheel S, the spring-catch U, the slide V, and the cam W, on the awl-driver or stock.

Also, the combination of the movable or sliding peg-receiver with the peg-wood carrier and the awl-driver or stock, the same being applied and made to operate as stated in specification.

No. 11,543.—HENRY H. BEACH.—*Improvement in Winnowers*—Patented August 15, 1854.

The invention clearly represented in the sectional drawing consists of two principal features. The first is, that it embraces no proper shoe, or shaking apparatus, or sieve. The second is the arrangement of the width and pitch of the discharging-board F in combination with the inclined planes or slats L L L, so that the grain shall first fall against the first L, and in the front edge and strongest part of the blast, it being diminished in progressing from across 1 towards arrows 8.

Claim.—The claim is restricted to the direct division of grain, effected by the arrangement described.

No. 11,514.—WILLIAM D. ANDREWS.—*Improved Centrifugal Pump.*—Patented August 22, 1854.

The drawing is a vertical section, its plane being through the centre of the pump.

Claim.—The construction of a pump having a hub E in the shape of the base of a cone inverted, with arms *a* attached to its periphery, of a gradually decreasing width as they approach its base, placed within a

shell corresponding in shape to the outer circumference of the arms, and having induction passages of a spiral form gradually decreasing in pitch to their point of delivery, and eduction passages of a spiral form of a gradually increasing pitch until they attain a straight line.

No. 11,545.—NATHANIEL A. BOYNTON.—*Improvement in Hot-Air Furnaces.*—Patented August 22, 1854.

The fire-chamber C is somewhat dome-shaped, and communicates by lateral upright pipes with the ring *e*, which surrounds the top of the said dome. From three equidistant points on the ring the same number of pipes converge to a central hub *g*, from which the smoke-flue passes off, the amount of draught through the whole system being subject to the control, at the point, of a puppet-valve *i*.

Claim.—1st. The arrangement and construction of the dome, and heating-ring surrounding the same, combined by a series of pipes opening into the base of the dome and carrying the smoke up over the same, as herein specified.

Also, the construction and arrangement of the smoke-pipes so as to prevent the lodgment of dirt therein, and precipitate the same into the fire-chamber, thereby preventing the clogging of said pipes.

Also, the puppet-valve cover, arranged and combined with the dome of the furnace, by which I insure a stopper at that point not liable to the derangement of ordinary valves used for similar purposes.

No. 11,546.—RICHARD C. BRISTOL.—*Improvement in Rotary Engines.*—Patented August 22, 1854.

Claim.—1st. Resting of the outer cylinder C, by lugs F F, upon a convex bearing, with a plate interposed and made adjustable by set screws or wedges.

2d. Driving out the slides by steam N N^1 N^2 N^3 acting under pistons at each end of them, two being drawn out in equilibrio, while the other two are being acted against to propel the engine.

3d. Using a cock or valve L in the exhaust-pipe, to be closed before starting the engine.

4th. The metal rings G G upon the outer head, and fitted over elastic packing, and forced up to the ends of the cylinder by springs, to provide for the expansion and contraction of the metal.

5th. The use of set-screws *s s* for restraining the action of these springs and preventing the atmosphere from causing undue pressure on the rings.

6th. The peculiar method of making the joint in the abutment so as to be adjustable and perfect on the face of the inner cylinder at the end of the abutment, and on the periphery of the inner head.

Figure 4 is a perspective view, on a smaller scale than the rest of the figures.

No. 11,547.—Benjamin Bridendolph.—*Improvement in Hominy Mills.* Patented August 22, 1854.

The shaft C has its surface worked into spiral grooves, and the salient edges of these are covered with undulations presenting a surface which is suitable for hulling the grain, and at the same time for breaking it to the requisite size; a wire-screen and fan-blast are added.

Claim.—The compound spiral hulling-shaft, constructed as herein described, and operating in connection with a roughened concave for hulling and breaking corn, substantially as specified.

No. 11,548.—Absalom B. Earle.—*Straw Cutter.*—Patented August 22, 1854.

The feed-trough B of this machine is supported on a suitable frame, above which are hinged vibrating arms G, carrying knife F, which is moved by hand by means of the handles M in a chopping stroke, whilst the straw is fed also by hand. Near the top of posts A A are placed springs K, crowned by buffers L, which meet the arms as their stroke is finished, and repel them upwards, as well as break the concussion upon the posts. One person or two may work this cutter, and vary the stroke according to the quantity of straw presented to the knife.

Claim.—The arrangement of spring and vibrating arms.

No. 11,549.—Wm. M. Ellis.—*Improvement in Steam-Engines.*—Patented August 22, 1854.

Claim.—The annular cylinder A B, and piston K, between the crank and cross-head, and uniting the two latter by a connecting-rod passing through the space within the two former.

No. 11,550.—Wm. Z. Hatcher.—*Improvement in Stop and Waste Cock.* Patented August 22, 1854.

This improvement consists in constructing a waste-way *c e* in the band of the cock, so that the waste may flow through it into the waste-pipe *d*, which way soever the plug may be turned to shut off the flow from the inducting pipe D. This is effected by an aperture through the plug and parallel to its handle C. It is plain that when the flow is shut off, this handle will stand at right angles to the band, and its through-way will be in communication with the water-way *c e* and with the waste-pipe *d*, thus allowing the waste fluid in the discharge-pipe D^1 to flow through the waste-way *c e*, and out at waste aperture *d*.

Claim.—The peculiar waste-way *c e*, in combination with the through-way of the plug and with the waste outlet *d*.

No. 11,551.—Levi Heywood, Joseph L. Ross, and James K. Otis.—*Improvement in Portable Bureaus.*—Patented August 22, 1854.

This improvement consists in forming an independent frame or case which receives all the side-pieces which form the drawers, the whole bureau being supported and rigidly held together when set up, by a peculiarly constructed back; which also serves, when the bureau is dismembered, for a bottom to the frame or case which receives the different pieces of the drawers. The different pieces which compose the bureau can be readily fastened together (no glue being used) or taken apart; and when set up, the back is so constructed as to maintain the strength and rigidity of the whole, and also serves as a back to the independent frame when the bureau is in pieces.

Claim.—Forming, in a bureau or case of drawers which is susceptible of dismemberment, an independent frame or case, which, when the parts are disjointed, and the back of the bureau attached to it, serves as a box or case to receive the front, back, and end pieces of each drawer, the pieces which compose each drawer being packed in the same compartment of this independent frame, in which the said drawer slides when put together.

No. 11,552.—J. Burrows Hyde.—*Improvement in Machinery for Coating Telegraph Wires.*—Patented August 22, 1854.

I am aware that it has been attempted to coat wires with gutta percha by means of a cylinder, to which is fitted a piston, and having holes through one side of the size of the wires, on the other side the holes being of the size of the wires when coated; and the coating being applied by the pressure of the piston while the gutta percha is in a melted state. by heat applied externally to the cylinder; and, therefore, I do not claim broadly the coating wires by drawing them through a vessel having holes on opposite sides.

Claim.—But I do claim the employment of the moulding kettle, with or without the melting kettle, provided and combined with an aperture covered with a disk of India rubber or its equivalent, having a hole or puncture in the centre which admits the wire and prevents the escape of the contained composition, and with the nozzle or die for determining the thickness of coating of compound to be put on the wire, substantially as and for the purpose specified.

Also, I claim the use of the cone (which determines the thickness of the coating) in such manner as that the outer end or nozzle thereof shall, when in use, terminate in and be covered by water, so that the covered wire shall emerge from the cone directly into or while the latter is in the water, through which the wire will then pass, as hereinbefore described, for the purpose of coating the composition. And, finally, I do not claim the use of the apparatus solely for the purpose of covering telegraph wires, but it may be applicable and useful for other equivalent uses, all of which I claim.

No. 11,553.—BERNARD HUGHES.—*Bisulphuret of Carbon Engines.*—Patented August 22, 1854.

The improvement consists in the application of the bisulphuret of carbon to any convenient form of steam-engine as a motive power, when the vapor of said substance, after it has been passed through the cylinder, is condensed and preserved for the future supply of the boiler.

No. 11,554.—GEORGE JACKSON.—*Improvement in Warp-Knitting Looms.* Patented August 22, 1854.

Claim.—The arrangement and combination of the pressers *b b* and sinkers *o o* in the frame *z*, as described, whereby the pressers and sinkers move together, and can be adjusted at such distance apart as may be requisite to graduate the size of the stitches as required.

Also, the arrangement of the cams which are attached to the cam-wheels H H and O, on one common shaft G, to produce the relative movements of the pressers *b b*, the sinkers *o o*, the needles *e e*, and the thread-carrier bar, with the carriers *t t*, in combination and co-operation with the movement of the face-cam *y*, which cam being revolved by the movement of the shaft G, through the spur-gear-wheels M and N, produces the relative movements of the thread-carriers to the right and left, and under and above the needles, and gives the peculiar character and figure of the fabric knit, so that by changing the surface of the face-cam and altering the relative proportions of the spur-wheels to each other, the figure of the fabric may be altered indefinitely

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No. 11,555.—ABEL F. LEWIS.—*Improvement in Floating Anchors.*—Patented August 22, 1854.

Claim.—The arrangement of the canting-hawser *f*, cable *g*, and floating anchor.

No. 11,556.—ROBERT MARQUIS.—*Apparatus for Balancing and Hoisting Sashes.*—Patented August 25, 1854.

This invention consists in the peculiar arrangement and combination of a single cord with one end fixed at R, with the pulleys A B C D, the friction-roller F, windlass G, ratchet-wheel M, pawl N, and crank L, by means of which the sashes are raised or lowered simultaneously or separately, without the binding which usually occurs when the cords are attached to the sides of the sashes, and each sash has a cord down each side.

Claim.—The single cord, which, passing around pulleys at the mid-width of the sashes, is operated by a winch in the jamb, enabling the simultaneous or separate movement of each sash, without liability of binding by the unequal expansion of different portions of the cord, or impairing the strength of the sash by the removal of its substance.

No. 11,557.—ELBRIDGE MARSHALL.—*Manure and Lime Spreader.*—Patented August 22, 1854.

In this machine H H are both carrying and driving wheels. From hopper C the lime is distributed or sown by the revolving grooved cylinder D, which is swept by the brush J, vibrated by means of lever L and cams K.

Claim.—The employment of the vibrating brush, substantially as, and for the purposes, set forth.

No. 11,558.—HENRY MELLISH.—*Improvement in Grain Mills.*—Patented August 22, 1854.

Claim.—I claim the arrangement of the ring-saws *n*, as set apart by the washers *o*, on the bolts P, with the cracker-rest *r*, enclosed by them, in combination with the adjustable case D, or its equivalent, for the purpose of cracking ears of corn, and also shelled grain, that it may be the more readily received between the burr *k* and the grinding-surface of the adjustable case D, and for the further purpose, by the oblique direction of the teeth on the outer edges of the ring-saws, and that of the teeth on the inner surface of the adjustable case D, of forcing the cracked grain into the space between the periphery of the burr *k* and the grinding-surface of the adjustable case D.

Also, the arrangement of the burr *k*, constructed as above described, in combination with the finishing-plate *m* and the adjustable case D, or its equivalent, operating, as the burr does, conjointly with the ring-saws, or inside the adjustable case D and the toothed side of the finishing-plate *m*, against the front surface of the adjustable case D, for the purpose of further grinding and giving the required degree of fineness to the meal as it passes between them; the whole being arranged, combined, and operating conjointly, substantially in the manner and for the purpose above described.

No. 11,559.—J. A. PEASE.—*Pumps.*—Patented August 22, 1854.

The inventor produces a continuous flow in the diaphragm-pump, as follows, viz: around the aperture of the egress-pipe at *l*, an air-tight box B is secured; this box has a flexible covering s^1, which, during the upward or exhausting stroke of the piston *e*, is pressed by the atmosphere against the water in said box, and of course continues the flow through pipe *s*, until, on the downward motion of the piston, the valve *m* be opened; the flow is then continued by the power applied to the piston-rod.

No. 11,560.—WILLIAM D. PORTER.—*Wood-Gas Generator.*—Patented August 22, 1854.

Claim.—The construction of the reservoir B for wood, and the double cones E and D, shown in the drawing; the design of the invention being to use green resinous woods as the material, and to first heat them

at a comparatively low temperature, less than a full red heat, and then allow the vapors generated to be forced through the apertures in the cone E, heated to a full red heat, the gas passing out afterwards at F.

No. 11,561.—HENRY RICHARDSON, SHELDON MORRIS, Jr., and BENNET C. PERRY.—*Improvements in Umbrellas.*—Patented August 22, 1854.

The description of umbrellas to which this invention relates is, that the ribs of which fold, and the stick of which is jointed in pieces, for the purpose of enabling the umbrella to be carried in the pocket or conveniently packed for travelling.

Claim.—1st. The combination of the spring *e*, and its hook or catch *g*, with the hinge F, the said spring being secured to one part of the hinge or rib, and the hooker-catch taking into a notch *f* in the outer part of the hinge or rib, when the two parts of the rib are in line, for the purpose of making the joint rigid, substantially as set forth. We claim that the said improved combination is much more easily made, and more efficient in its operation; also, that it is much cheaper of construction, both in material and labor; and further, that is much neater in its finish.

2d. Attaching the several joints or parts A B C of the stick together, by means of a link *c*, which is connected to the end of the male-screw *b*, and has a ring *d*, or equivalent, fitting in a hollow part behind or within the nut *a*, which prevents its passing through the nut, but which, at the same time, allows the screw to turn freely within the nut, substantially as described.

No. 11,562.—ARTEMAS ROGERS.—*Improved Instrument for Manufacturing Door-Knobs.*—Patented August 22, 1854.

In the figure, A A represent the arms, B the joint, C C the jaws, and D D the threads or projections on the outside of the jaws.

Claim.—The instrument described, or its equivalent, by the use of which the workman is enabled (by one and the same instrument in continuous use) to form the screw-threads, or their impressions, within the socket of a door-knob, remove the knob from the mould to the polishing furnace, manipulate it during the fire polishing, and finally deposite it within the annealing kiln, substantially in the manner and for the purpose set forth.

No. 11,563.—C. M. ALBURGER.—*Hose Hydrant.*—Patented August 22, 1854.

The figure illustrates this convenient arrangement of parts well known in separate hydrants.

Claim.—The combination of these devices with the column, for convenience and ornament. Also, the peculiar construction of the two-way cock.

No. 11,564.—THOMAS CROSSLEY.—*Improvemcnt in Manufacture of Carpets.*—Patented August 22, 1854.

Claim.—A two-ply ingrain carpet, having the lower ply composed entirely of linen or cotton, and the upper ply of wool, when united substantially in the manner described, for the purpose of producing a durable and economical carpet, to be subsequently printed on one side as described. No illustration.

No. 11,565.—JOSEPH HILL.—*Improved Daguerreotype Holder.*—Patented August 22, 1854.

This improvement is made of two blocks of wood, or any suitable material, connected by dowel-pins *c c* and held together by India rubber springs D D. The daguerreotype plates are held to the blocks by metallic jaws F.

No. 11,566.—JOSEPH C. JINKINS.—*Improvement in Tuning-Forks.*—Patented August 22, 1854.

The invention consists in producing sounds of any required pitch by means of a movable cross-bar *a b* inserted at regulated positions between the prongs of a tuning-fork, as represented.

No. 11,567.—ABNER W. JONES.—*Improvement in Preventing Boiler Explosions.*—Patented August 22, 1854.

Claim.—The combination of the rock-shaft *j* with the slide-valve *k*, piston *n*, spring-valve *g*, and steam-chest *c*.

No. 11,568.—DUSTIN F. MELLEN.—*Improved Machine for Sawing Clapboards.*—Patented August 22, 1854.

Figure 1 is a plan of this machine. Figure 2 is a longitudinal section upon the centre of figure 1; and figures 3 and 4, views of parts of the feeding apparatus.

Claim.—The arrangement of the devices by which the distance between the saws is varied to meet the varying thickness of the logs to be sawed, and by which the saws, when so adjusted, are elevated and depressed together as desired.

Also, the method of feeding the log between each successive cut of the saws; which is, by means of the operation of several parts marked u^1 v^1 w^1 x^1 y^1 a^2 z b^2 c^2 d^2 e^2 f^2 g^2 and h^2, acting upon and in connexion with the spur-centre t^1.

Also, the method of raising and lowering the saws when it is desired not to use them at the same time, but alternately during the forward and backward motion of the log, the same being effected by the combination of the unlocking, shifting, and locking apparatus, m^1, h^1, k^1, k^1, in combination with the lever b^1 and the chains q, all as specified and set forth.

No. 11,569.—Wm. O. Rust.—*Improved Saw-Set.*—Patented August 22, 1854.

Claim.—1st. The rotary bender K and its adjusting screw I, in their combination with the movable lever E.

2d. The arrangement of the regulating back-stop G in the stationary arm, so that it may be used in connexion with the movable lever.

No. 11,570.—Hugh Langster.—*Improvement in Securing the Glass Sides of Lanterns.*—Patented August 22, 1854.

A peculiar arcuate spring 6 intervenes between the frame of the lantern and the glass, by which the latter is confined to its place and readily restored when broken.

Claim.—The combination of the spring 6 and the frame 10, arranged and operating substantially as herein set forth, not intending to claim the springs uncombined with the frame; or some device equivalent thereto.

No. 11,571.—Edmund Shaw.—*Improvement in Sewing Machines.*—Patented August 22, 1854.

Claim.—The combination of the rack-bar C with the bar *b*, both curved in the same shape, and forming a clamp capable of receiving a vibrating motion from the diamond-shaped teeth of the pinion *q*, and constituting a clamp for sewing the seams of boot-legs, as described.

Also, feeding the clamp along and guiding it, so as to keep the leather to be sewed always in proper position with regard to the needle, and at the same distance from the same, by means of the rack *d d*, gear *q*, with its diamond-shaped teeth, and proper guides *r* and *s s*, as described.

No. 11,572.—Halcyon Skinner and William Greenhalgh.—*Improved Carpenters' Gauge.*—Patented August 22, 1854.

A summary description of this instrument cannot perhaps be better given than in the language of the inventors themselves, who say that their invention "consists in the combination into one convenient instrument of several sliding adjustable gauges, so arranged that various operations in carpentry hitherto requiring the employment of several distinct instruments may all be accomplished by the use of one" of these improved gauges. The drawings give a complete idea of the mode of construction and appearance of this ingenious and useful tool. Figure 1 is a longitudinal sectional view of the gauge, and figure 2 a view in perspective.

Claim.—The combination of the frame *a* with the adjustable sliding-bars *f k*, adjustable fences *d g i*, and set-screws *e h*, in the manner herein described.

No. 11,573.—ROBERT SPENCER.—*Improvement in Harness-Saddle Trees.* Patented August 22, 1854.

This improvement consists in the construction of a saddle-tree by riveting upon each side of a skeleton plate of iron A, a piece of strong, thick leather C D, of suitable size and shape to cover the plate.

Claim.—As a new article of manufacture the improved harness-saddle tree, constructed substantially as described, of combined iron and leather, (or the equivalent of leather,) the iron serving the purpose of a skeleton and giving it the proper rigidity, while by trimming the leather portions of the tree, the exact conformation is attained.

No. 11,574.—ALFRED A. STARR.—*Catamenial Ameliorator.*—Patented August 22, 1854.

This invention consists of a hoop-spring to encircle the body, and having flaps *c c*, *a a*, springing against the person; the hoop is adjustable to the size of the waist, by means of sliding-joint, figure 2, fastened by screw and nut *f*. The napkin is supported by the hoop.

Claim.—The combination of the elastic springs *a b c*, in the manner and for the purposes set forth.

No. 11,575.—DAVID and SAMUEL SWARTZ.—*Plough.*—Patented August 22, 1854.

The invention is confined to the construction of the fastening of the mould-board and land-side to the point and coulter in one piece. This is effected by means of two or one horizontal tenons or tenon, and one oblique tenon F, received each into a corresponding slot shown at D and C. It is the construction of this piece precisely as described that constitutes the claim.

No. 11,576.—ROBERT SPENCER.—*Improvement in Harness Saddles.*—Patented August 22, 1854.

Claim.—The new article of manufacture, consisting of a properly shaped harness-saddle seat A, cast in one piece, with the unfinished jockey-shaped side-bars *b b*; the said seat requiring to be only smoothed and japanned to adapt it to use, and the side-bars requiring to be covered with patent leather or other jockeys or skirts, of sufficient thickness to make a smooth and harmonious finish with the japanned surface of the seat, substantially as represented and described.

No. 11,577.—PAUL STILLMAN.—*Improvement in Registers for Numbers applicable to Steam-Engines.*—Patented August 22, 1854.

The construction is as follows: *a* is a permanent axis upon which the count-wheels *b* turn; these wheels are formed of thin plate, from which a rim projects on one side, forming a broad periphery sufficient to mark the figures upon, around the face of which are made ten Arabic

or other characters. The wheels b^1 b^2 b^3 b^4 have projections from the edge of the rim at *c*; two arms *d* project from the axis *a*, upon which they freely turn, one on each side, extending beyond the periphery of the wheels, with a cross-piece *d* uniting the two; one of these arms is connected in any convenient way with the movement it is intended to register, so as to cause them to vibrate a proper distance. On the cross-piece d^1 there is a pawl *c*, that catches upon the projection *c* upon the first wheel of the series. The pawl is borne down to its place by a spiral spring l^1, surrounding the piece d^1; a roller e^2 is attached to the side of the pawl, to ease it over the projections. On the first wheel b^1 there is a spring-catch or clutch *f* that lies back against the wheel during its revolution, till it comes to the point where the second count-wheel is to move; at which time an inclined projection *f* from it strikes a stationary style *g*, and throws the clutch out, so as to catch a projection upon the second wheel and move it one number, in doing which the clutch is released by passing the style, and the first wheel is thus freed so as to move round alone, till it is again brought to the position to carry forward the second wheel another number. On the revolution of the second wheel the third is moved one figure by the same device, and so on through the series. Each of the wheels has a folding-clutch or pawl *h*, held up to its place by a spiral spring, which is for the purpose of holding the wheels firmly in place.

Claim.—The employment and arrangement of the clutches having a spring sideways, so as to catch into the fall-notches and the styles outside the count-wheels, by which they are operated to move a series of count-wheels, in the manner and for the purpose set forth.

No. 11,578.—FRANCIS C. TREADWELL.—*Improvement in Self-Feeding-and-Discharging Ovens.*—Patented August 22, 1854.

This improvement consists of an oven with a peculiar arrangement of flues, and operated with an endless band for the introduction of, and withdrawal of, the articles to be baked.

Claim.—The use of the combination of the furnace, flues, and dampers, substantially as herein before set forth, in combination with an endless band, running through the oven and over drums placed outside of it, for the purpose of making a perpetual baking-oven, substantially as described.

No. 11,579.—ABNER WHITELEY.—*Track-Clearers for Grain and Grass Harvesters.*—Patented August 22, 1854.

The invention is confined to the construction of a conical track-clearer, attached at its apex by a swivelled hinge-joint to the outer end of the cutter-bar, so as to admit of rotation of the cone. The cone is set with four or more oblique ribs *i i*, arranged symmetrically, so that each rib when it arrives at the upper surface points obliquely forward and inward, and when it arrives at the lower part or surface it points obliquely forward and outward. This arrangement of the ribs, when

the cone is drawn forward, causes it to rotate, and thus to deposite all the cut grain or grass falling on it towards the middle part of the track.

Claim.—The rolling cone G, moving on the axis I, and furnished with a joint-clearer J, for the purpose of clearing the track for the cut grass.

No. 11,580.—PHILANDER WILBOR.—*Improvements in Cheese and other Presses.*—Patented August 22, 1854.

The point of this press is an arrangement by which a continuous pressure of the cross-bar or platen E is obtained from a succession of strokes of the arm G^1. The cam G, acting on the roller H during the downward stroke of arm G^1, depresses the platen E, and the slide I^1, engaging in the rack D^1, retains it, while the arm G^1 is raised and the rack D allowed to fall. The slide I, engaging immediately into rack D, affords resistance for a succeeding stroke.

Claim.—The combination of the two rack-slides D D^1 with the respective attachments of the cam G and friction-roller H; by which means, in connexion with the slides J J^1 and accompanying racks, the press is operated in the manner and for the purpose set forth.

No. 11,581.—MELVIN SHAW, assignor to MELVIN SHAW and DANIEL GAGE WHEELER.—*Improvement in Clamps for Sewing Machines.*—Patented August 22, 1854; antedated February 22, 1854.

Claim.—The combination of the sliding bar E with the curved clamps P Q and the rest S, constructed and operating together as set forth; by which means, as the work is fed through the machine, it is kept constantly up to the needle, and the stitches are placed at a uniform and unvarying distance from the edges of the material, without dependence upon the care or skill of the workman.

No. 11,582.—SOLOMON S. GRAY, assignor to S. S. GRAY and S. A. WOODS.—*Improved Machine for Planing Lumber out of Wind.*—Patented August 22, 1854.

These improvements relate to the class of machines for "Planing Lumber out of Wind," and are:

1st. Construction of the cutter-head A. An instep C, of peculiar form, is the novelty alleged by which the shaving, of whatever thickness, is broken up instantly, the instep acting as the cap or counter-iron of the bench-plane.

2d. The device for holding the piece to the bed, however irregular its ends may be.

The dog or stop H is so adjustable that it will firmly remain at any desired height from the bed I, by merely raising it thereto, which is effected by peculiar tongues on the bed, catching corresponding grooved ends of the dog. The clamp E consists of three pieces, *h*, *h*, and E; the pieces *h h* being pivoted at *k* to the piece E, and the piece E being pivoted to the adjusting-screw F, allows the pieces *h h* to adapt themselves to the end of the plank.

Claim.—The form of cutter-head and the two devices just described, for clamping irregular ends by merely turning the screw-head G.

No. 11,583.—DANIEL TREADWELL, assignor to HERBERT H. and FREDERICK H. STIMPSON.—*Improvement in Dampers for Furnaces and Stoves.* Patented August 22, 1854.

The expansion of the arched dome of the fire-chamber raises the bar *m*, actuates the weighted bell-crank *i*, and, by means of it and the bar *g*, opens and closes the damper *d*.

Claim.—Using the expansion of the stove or furnace for closing the damper, through the medium of the devices herein above described, or any other combination of devices substantially similar.

No. 11,584.—THOMAS W. HARVEY'S administrators, assignors to the "HARVEY STEEL AND IRON COMPANY."—*Method of making Wrought-Iron direct from the Ore.*—Patented August 22, 1854.

The improvement consists in causing the deoxidating and desulphurating flames and gases to act directly in contact with properly prepared ores of iron, &c., placed upon suitably arranged tables, while, at the same time, a high degree of heat is imparted to the under side of said tables.

No. 11,585.—JAMES A. BAZIN.—*Improvement in Cog-Gearing.*—Patented August 22, 1854.

The nature of this improvement consists in forming toothed-wheels by simple radial cuts stamped into the edge of circular plates, the teeth thus formed being bent alternately to the right and left, and no spaces being cut out, as is usual, between the teeth.

Claim.—The within described manner of manufacturing cog-wheels, every alternate tooth being bent in opposite directions from the plane of the plate, in the manner described.

No. 11,586.—M. H. MERRIAM and W. W. NICHOLS, assignors to W. W. NICHOLS & Co.—*Improved Tool-Rest for Turning-Lathes.*—Patented August 22, 1854.

By a combination of parts the tool-posts E may be raised or lowered by the screw C working in the nut F fastened to the slide B, simply by turning the nut F, the parts being kept in position by the gibs or slides D working in grooves.

No. 11,587.—B. F. GRAVES, assignor to W. C. KNOWLTON.—*Tool for Boring Legs of Pianos.*—Patented August 22, 1854.

Claim.—"The combination and arrangement of the twist-auger H, the two cutters or chisels F and G, and their throats, on the block, so as to p erate together and simultaneously, making a chamber or recess in a e ce of wood of the form specified," viz: conical as at A, terminating a cylindrical recess as at B.

No. 11,588.—SIDNEY S. TURNER, assignor to ELMER TOWNSEND.—*Improvement in Sewing Machines.*—Patented August 22, 1854.

Claim.—The arrangement of a hook or hook-needle A underneath, so as to work up through the feeding-bar L, in combination with the arrangement of the presser M above the feeding-bar, so as to press downwards towards it, substantially as described, such enabling me to obtain an advantage in operating by the single chain-stitch sewing machine. Also, in combination with the mechanism for giving the vertical movements of the needle, the slot *a b c*, and the screw or pin F, (or mechanical equivalents therefor,) for producing reciprocating semi-rotative movements of the needle during the vertical movement of it, substantially as described.

No. 11,589.—JACOB SENNEFF.—*Machine for forming Heddle-eyes.*—Patented August 22, 1854.

Claim.—1st. The method of casting the eyes on the strands of yarn or other material by inserting the yarns successively within a mould, secured on a vibrating frame L, operated at the proper intervals by means of the eccentric cams I I, the mould being opened at times to disengage the eye therefrom, and provided with a cone 24 for forming the eye in the mail, and capable of being withdrawn therefrom before the mould opens.

2d. The manner of operating the core so as to enable it to be so withdrawn from the eye of the mail after the same is formed, and while it is firmly embraced within the mould, by means of the spring S N^1, and screws 25 and 33.

3d. The core carrier 27, resting in a notch formed in the top of the spring S^1, and having pins 26 on its face, which pass through slots in the mould-plates, and spring W for moving the core horizontally from the stationary half of the mould, and keeping it midway between the mould-plates when they are opened by the lever T, and preventing its being thrown violently either way.

4th. The manner of operating the heddle frame-holder D, by means of the eccentric cams I I on the shaft B, capable of being moved longitudinally over the grooves in said shaft; right-angled levers D, to which the heddle-frame is secured; and spiral spring 2 *i*, for keeping the ends of the levers always in contact with the eccentric cams.

5th. The screw-shaft C, and clamps J, and the adjustable gearing K at the ends of the screw and main driving-shafts. Figure 7 represents a detached part of the machine on a larger scale.

No. 11,590.—WILLIAM VAN ANDEN.—*Machinery for rolling Shoulders on Axles.*—Patented August 22, 1854.

Claim.—The arrangement of the cam-rollers, having the reduced surfaces J J, with the guide and feeding tube or box P, through the hollow space R of which the blank bar can be inserted and the finished axle withdrawn without displacing the roller or cams.

No. 11,591.—Robert Ross.—*Steam-Cock.*—Patented August 22, 1854.

When great pressure obtains in such cocks, the valve disk *a*, when rigidly attached to the stem or rod C, is liable to twist off in operating by the handle *w*. Mr. Ross claims to avoid the possibility of such accidents, by allowing the disk-valve *a* to remain fixed in its seat, (during any accidental turning of the handle *w*,) and this is effected by allowing its stem *b* to move freely with the valve-rod C; the screws *e e* prevent the stem *b* from dropping out of its chamber *c*[1]. The claim covers this one feature.

No. 11,592.—Robert M. Abbe.—*Improvement in Hog-pens.*—Patented August 29, 1854.

This hog-pen has a front A swinging on pivots B, and carrying an iron guard F, in order to keep the hog from the trough E whilst the latter is cleared, or the food poured into it, and to compel him to approach the trough direct in front of the guard F. Trough E is a short oval cast-iron basin, so that each hog feeds separately and with improved manners.

Claim.—The swinging-guard of the pen, in the manner and for the purpose substantially as herein set forth and described.

No. 11,593.—William T. Bazemore.—*Cultivator for Cotton.*—Patented August 29, 1854.

This implement has U-shaped hoes C D, the latter of which rises to form handles like those of a plough, and is fixed upon bar A. Hoe C is adjustable in relation to D, by means of a screw-thread rod F, and keys E hold the hoes C in working position.

Claim—The form of the hoes C and D, and the arrangement of the rods A and F; by which arrangement the hoes are made adjustable, and yet may be held stationary.

No. 11,594.—William Biddle.—*Improvement in Washing-Machines.*—Patented August 29, 1854.

This improvement consists in the mode of grasping and holding the clothes while rubbing out the dirt, which is an imitation to some extent of the hand process, causing the water to flow into and out of the dirty clothes, carrying the impurities along with it.

Claim.—The combination of the vibrating bar *g* and vibrating wash-board *i* with the lever *e*, in the manner and for the purpose described; the vibrating wash-board having its jointed attachment nearer to the centre of the motion of lever *e* than the bar *g*, so that in the motion of the lever back and forth, the clothes shall be griped and released between *i* and *g*, in the manner and for the purpose set forth.

No. 11,595.—GARDNER A. BRUCE.—*Maize Harvester.*—Patented August 29, 1854.

The invention consists in the combination and arrangement upon a cart of the obliquely set rotary cutters G G, shown in the drawing, with rotary shafts L and M, and arms *o o o* and N N, cutting and depositing the maize between shafts S S or arms *d d*, and the rotating shafts S S. These elements, all acting together, cut, bend over, and deposite upon the arms *d d* the maize stalks; and the arms *d d*, at the proper intervals, deposite the charge upon the ground at the will of the cartman, controlling said intervals by means of spring-catch U.

Claim.—So arranging the cutters G that they will, as they are caused to revolve, cut the stalks at an angle in an upward direction, and at the same time give them, in falling, a direction toward the centre of the machine; and the combination with said cutters of shafts and arms N and N, in the manner and for the purposes stated.

No. 11,596.—LEBBEUS BROOKS.—*Improvement in Carpenters' and Masons' Bar-Level.*—Patented August 29, 1854.

This instrument may be used for ascertaining the number of degrees of inclination of any slope. For this purpose the index point of the index-bar is brought up to the zero-point of the scale provided on the end of the beam. The instrument is then placed on the slope with its edge upwards, and with that end on which the scale is made and applied highest on the slope. Next, by turning the button of a spring-catch, the catch is thrown out of action on its notch or tooth-plate; the circular limb or divided plate is then revolved until the bubble of the spirit-level rises to the middle of the tube. This done, the button of a cam is turned so as to let the spring-catch into action on its notch-plate, whereby we connect the circular plate and index-bar, and throw the former into a correct position for the latter to be moved until the bubble of the level is brought into the middle of the tube. When this has been done, the clamp-screw may be turned up against the index-bar, so as to confine it in position. While that division of the circular plate which is close against the index serves to point out the number of divisions of the plate comprehended in the arc of elevation, the angle of excess may be read off on the scale at the end of the beam. The particular object of this invention is to provide the bar-level with a means of more accurately determining the angle of excess than can be done by the divisions of the small circular limb. For this reason the inventor divides the circular limb into equal parts, say of five degrees each, and applies the long arm and scale to the beam, whereby, the increased length of arc measuring five degrees on such scale, he can readily divide such arc into five parts, and subdivide them, as occasion may require.

Claim.—I do not claim the combination of a circular divided limb on plate C and a spirit-level with a bar or beam A; but what I do claim as my invention is the combination therewith of an index-bar N, its divided sectoral arc or limb C, and its locking-plate F, and spring-catch G, or the mechanical equivalents for such locking-plate and catch, the whole being made to operate together substantially as specified.

No. 11,597.—E. W. BULLARD —*Improvement in Window-Blind Fastenings.*—Patented August 29, 1854.

The improvement consists in a swivel-box *j*, with its projections or hasps K, turning freely upon, and, when the blind is opened or closed, rigidly held by, the angular rod *h h*, the rod having a bearing upon which it swings, in the projecting plate *i*.

No. 11,598.—JULIUS C. DICKEY. *Improvement in the Manner of Fastening Saddle-Skirts to the Tree.*—Patented August 29, 1854.

This invention consists in providing an elastic clamp-plate, with edges turned up and formed into teeth, similar to those represented in the figure, for the purpose mentioned in the following claim. A is the saddle-tree, B the terrets, C the skirts, D the clamp-plate.

Claim.—The combination of teeth upon the elastic clamp-plate, by which means it is immovable in its position upon the leather, with a screw or screws, or the equivalent thereof, to draw the spring clamp-plate and jockey-plate together for fastening the skirts to the saddle-tree, whether the jockey-plate be adjustable or otherwise.

No. 11,599.—I. B. DUDREY.—*Stave-Machine.*—Patented August 29, 1854.

Two circular-saws *e f*, placed below the log, and, by suitable mechanism, carried to and from the log, as it passes, and cutting as the log passes in one direction, and the other as it returns.

Claim.—The combination of mechanism for causing the saws to approach to, and recede from, the log as it passes—the one cutting in one direction, the other in the opposite direction.

No. 11,600.—I. B. DUDREY.—*Stave-Machine.*—Patented August 29, 1854.

Claim.—The employment of two knives *b c*, of the form described, within the curved jaws of a vibrating cutter-head A, for cutting the staves as it vibrates both ways, in combination with curved guides *k l*, for holding the staves after passing the feed-rollers *i i*, (on the opposite side of the machine,) as set forth.

The piece is fed to the knives by ordinary feed-rollers, and the double-edged cutters vibrate as it passes, cutting in both ways.

No. 11,601.—O. G. EWINGS.—*Improvement in Ploughs.*—Patented August 29, 1854.

This invention consists in a joint by which the beam may bend horizontally to the right or left. Straps of iron *d c* are placed on the upper and also on the under side of the beam, and connected by bolt *h*,

as a pivot. Adjusting screws *g* are arranged to make the beam stiff, if desirable.

Claim.—The jointed-beam *a b*, in combination with the adjusting-screws *g g*, as described.

No. 11,602.—Joseph W. Fawkes.—*Improvement in Manure and Lime-Spreaders.*—Patented August 29, 1854.

The important features of this machine are the hopper A, divided by the swinging diaphragm L, hinged at *n*, the plain rollers *a* and *b*, and the rods *f f*, having a lateral vibration to pulverize the manure and clean the rollers. The machine is especially designed to work wet manure.

Claim.—1st. Constructing the hopper with a swing-diaphragm or dividing-board L, by which the material intended for spreading is prevented from arching.

2d. The arrangement and combination of the moving breakers or pulverizers *f f*, (actuated by the devices substantially as described,) with the rollers *a* and *b*, for the more effectual distribution of the contents of the hopper.

No. 11,603.—Richard Fanning.—*Method of Grinding Cross-Cut Saws.* Patented August 29, 1854.

A curvilinear slot M, in the beam carrying the saw, receives friction-rollers L attached to frame, thus causing the saw to cut in a certain path, as it descends by its weight.

No. 12,604.—Joseph F. Flanders and J. A. Marden.—*Improvement in Machines for Splitting Leather.*—Patented August 29, 1854.

The operation of this machine is as follows: Rotary motion being communicated to the drawing-shaft B, the endless knife D D is set rapidly in motion, and the hide X, to be operated upon, is laid upon the feed-apron E, and is carried in between the rollers F and I, the distance of the latter from the edge of the knife being adjusted by its set-screw *d*, to accommodate it to the thickness of the required "grain," which then passes out of the machine at *r*, the "split" passing beneath the knife at *s*, and the spring-plate *h* keeping every portion of the hide firmly pressed up against the roller I, by which, as before explained, a great uniformity of grain is obtained.

Claim.—The use of the continuously revolving or endless belt-knife, as applied to machines for splitting leather, and operating in the manner as set forth.

No. 11,605.—J. T. Forbes.—*Improvement in Bedstead for Invalids.*—Patented August 29, 1854.

This bedstead is so constructed that the head of the mattress can be raised alone, or with it also that portion which supports the knees.

These movements are produced by suitable gearing in connection with driving-shaft *c*, which is operated by crank *r*. There is also a frame *j*, upon which (by an extra "sacking-bottom") the patient can be raised by means of other gearing arranged near the top of the bed-posts, and also moved by a crank. A new device is presented in the rock-shaft *z*, which the patient can move by means of string B, and, through arm *y* (at the other end of said rock-shaft) and cord *x*, thus set in motion crank *r*, to adjust the mattress without assistance.

No. 11,606.—NELSON GATES.—*Improvement in Washer-Hinges.*—Patented August 29, 1854.

Claim.—The employment within any number of joints in the knuckle of a hinge of separate metal-washers, which are of concavo-convex or other form, which renders them capable of serving as a pivot, or centre of the hinge.

No. 11,607.—JOHN GLEASON.—*Improvement in Slide-Valves.*—Patented August 29, 1854.

This invention consists in a certain mode of constructing the valve steam-ports and covering-plates, by which the valve is balanced, and the steam-ports opened to the full width very early in the stroke. Another object is obtained by the introduction of valves in the covering plates, viz: that, in case of the breaking of the valve-gear, the cylinder is preserved from an over-pressure, by allowing the steam to return, through the steam-way and valve, into the steam-chest.

Claim.—1st. The valve B, constructed as described, in combination with the cavities $g\ g^1$ in the covering-plate, and the enlargement of the steam-ports $a\ a^1$, substantially as set forth.

2d. The covering-plate C, in combination with the cavities $g\ g^1$, the passages $d\ d^1$ in the valve, and the safety-valves E E, placed on the top plate, as described, for the purpose of allowing the steam to escape from the cylinder into the steam-chest, when the pressure in the former exceeds that in the latter.

No 11,608.—DANIEL HAYWARD.—*Improvement in Manufacture of India Rubber.*—Patented August 29, 1854.

The improvement consists in the use of the steam-jacket both for the mould and the die employed in the manufacture of India rubber goods, and in the sudden introduction of cold water after the hot steam into the jackets. By the first device the vulcanizing of new articles is alleged to be more perfect, and the remelting and remoulding of old worn-out India rubber to be rendered attainable. By the second device the degree of hardness of the product, or its adhesiveness on the surface, can be moderated at pleasure.

The drawings exemplify the improvement as applied to manufacturing buckets.

Claim.—The claim is confined to remoulding worn-out India rubber goods, by the means stated.

No. 11,609.—SAMUEL M. HOCKMAN.—*Seed-Planter.*—Patented August 29, 1854.

In this machine D represents the feed-hopper, from which the seed falls on vibrating-screen W, under which is a directing-board H with cleats. This board conducts the seed to holes, to be received and scattered by radiated grooves *a a*, which are cut upon convex spaces in board M. The screen separates stones, &c., (which might clog the machine,) and throws them upon the ground, whilst it permits seed to pass through it.

Claim.—I disclaim the radiated grooves, as such; but do claim them as applied to a somewhat convex surface, as set forth. Also, I claim the screen.

No. 11,610.—ABRAHAM R. HURST.—*Manure Excavator.*—Patented August 29, 1854.

In this machine strong iron straps B, having hinges *c*, are attached to an ordinary sled. C is a strong cross-bar, armed with teeth D. By means of lever E and stop-bar F the teeth are brought into a working position, or so raised as to ride clear of the ground. The sled is drawn forward in the usual way, to loosen up manure for shovelling.

No. 11,611.—JOHN H. KING, Jr.—*Seed-Planter and Manure-Spreader.*—Patented August 29, 1854.

This machine is shown as worked by hand. B is the hopper; C a screen; *b*, seed-holes in hopper-bottom; G is a gauge having various sized holes to regulate the rapidity of sowing (by adjustment of large or small holes for working.) D is an agitator obliquely grooved above and below, (see figure 2,) and pierced with holes *i*. By means of levers E and *l*, the screen C and the agitator D are vibrated. The screen not only arrests the stones, coarse foreign seeds, &c., but also supports part of the feed, (when hopper is nearly full,) and at the same time agitates and thus prevents clogging. Below seed-hole *b* is a V-shaped scatterer S, which may be adjusted to throw the seed off at any angle.

Claim.—The adjustable scatterer S, but disclaims screen C.

No. 11,612.—C. R. LANDMAN.—*Improvement in Safety Fillers for Lamps.*—Patented August 20, 1854.

The rod D in the feeding-tube, being pressed in an inverted position against any surface, opens the spring-valve E F and permits the fluid to pass out. Also, when the rod D is forced in for this purpose it impinges upon the disk H, opening thereby the spring-valve H I to admit air.

Claim.—The use of the safety filling apparatus, made and operating substantially as hereinbefore set forth, in combination with a filler-case for the purposes set forth.

No. 11,613.—EZRA L'HOMMEDIEU.—*Improvement in Auger Dies.*—Patented August 29, 1854.

Claim.—The peculiar arrangement of the shank entrance of the matrix, that face of it against which the hollow surface of the auger-head rests and is formed, and the male die which forms the hollow or recess of the head.

No. 11,614.—JOHN G. MCCAULEY.—*Improvement in Harrows.*—Patented August 29, 1854.

This invention consists of tooth A, having two points standing at right angles to each other, and fastened to the harrow-beam C by band B and key D; when one point is worn or broken, the tooth is reversed to bring the reserve point into use.

No. 11,615.—JOHN B. NICHOLS.—*Improvement in Binding Folders.*—Patented August 29, 1854.

A B, in the drawing, are two bars connected together, as shown at one end, and having the other ends bent inward in a hook-form; one of the guides A works above, and the other, B, below the material C to which the binding D is applied. The binding is folded together and embraced by the guide-bars A and B. The blade of the guide A is elastic, to accommodate it to any variation in the thickness of the material. E is a movable slide, against which the edge of the material rests, and this slide is made adjustable to accommodate bindings of different widths. It is attached to the shank *d*, which is held by the clamping-screw *e*. F is the feed-wheel. H H are screw-holes by which the binding-guide is attached to the machine.

Claim.—The binding-folder, (made to guide and fold as described,) whether used in connexion with a sewing machine or with any other mode of fastening the binding after it is folded and applied.

No. 11,616.—WHITMAN PRICE.—*Cultivator for Potato Planting.*—Patented August 29, 1854.

This machine is somewhat like a double mould-board plough, having a strong standard *e* armed with a shovel *c*. The lower end of the mould-board is much inclined upward as it extends outward, and near the tip of the wing it is abruptly curved until it assumes a horizontal direction. A nearly V-shaped skimmer *a* strides the standard *e* and arms the lower margin of both mould-boards, presenting a sharpened edge below to scrape and form high furrows previously turned up for potato planting.

Claim.—The inventor does not claim a double mould-board, or a mould-board which somewhat dresses the top of the furrow; but does claim the particular form of skimmer-plate *a*, in combination with mould-boards *b*, tree *e*, and shovel *c*, substantially as set forth and shown complete in figure 1.

No. 11,617.—WILLIAM REDICK.—*Improvement in Seed-Planters.*—Patented August 29, 1854.

In this machine D is the hopper, from which the seed is once dropped by means of holes on the periphery of the axle B, which revolves with the driving and carrying wheel. The falling seed is arrested by the spring-plate *f*, which by its elasticity prevents the seed from being broken by the valve *d* when the latter closes. Through rod *b* the cams *a a* open valve *d*, which is closed again by spring *e*. All these devices are old, and the invention consists only in their arrangement to more fully accomplish check-row planting, irrespective of the irregular motion of the horse.

No. 11,618.—TITUS H. RUSSEL.—*Improved Saw-Mill Dog.*—Patented August 29, 1854.

This improvement consists in the adoption of such devices as keep the hinges of the dog securely in their places, thus maintaining the straightness of the kerf, and uniformity in the thickness of the lumber.

Claim.—The devices used for this purpose, which are the wedge W and the set-screw V, when used in combination in the manner and for the purpose set forth.

Also, the slide F (which carries the dog E of the head-block C), with a broad platform to support the dog firmly against lateral pressure, and a long narrow arm to extend back of the saw-race to the opposite end of the block *c*.

No. 11,619.—R. L. SIBBET.—*Improved Method of Tenoning Spokes.*—Patented August 29, 1854.

Claim.—Securing a series of spokes F upon a board or plate A provided with edges or projections B B, adjustable gauge-block *b*, guide-strip C, cross-piece E, cross-bar G, and block D, the parts being arranged in the manner and for the purpose set forth in the specification.

No. 11,620.—A. J. SMITH.—*Corn-Sheller.*—Patented August 29, 1854.

In the drawing *a* represents the hopper, from which the ears of corn are fed between cylinder *b* and concave *c*, and shelled. The cobs and corn fall upon endless apron *e*, which travels upon rollers *h g*. Toward the rear of this apron is a swinging guard-board which constantly meets the apron in its vibrations, or when the roller *g* is raised or lowered. By this board the cobs are prevented from flying backward,

and are carried forward to fall off at *h*, whilst the corn passes through the apron to meet the blast from fans *d*, and roll down directing-boards *l l* to escape from the machine.

The novelty lies in the guard-board *k* in combination.

No. 11,621.—J. C. STRODE.—*Hydraulic Ram.*—Patented August 29, 1854.

This is an improvement on Mr. Strode's patent of May 23, 1854, and consists in a modification of the puppet-valve and its chamber, with a view to the shock and adhesion of the valve. The shape of the valve and its chamber to effect this may be seen at *f f* and *b b*.

Claim.—The combination of the valve and its chamber, shaped as shown.

No. 11,622.—JOSHUA STEVENS.—*Chair for Exercising Young Children.*—Patented August 29, 1854.

This invention consists of a four-posted frame A, in which a frame B rides up and down. Spiral springs *b* suspend the chair, to which motion is given by the child's feet, which rest on a foot-piece attached to frame A. The seat of the chair is seen at *e*, and the back at B^1.

Claim.—The inventor does not claim a chair upon springs, as such, but his particular form and arrangement.

No. 11,623.—ELISHA WATERS.—*Improvement in Breast-Cups.*—Patented August 29, 1854.

Claim.—Connecting the chamber of the diaphragm pump with the breast-cup E, by means of the exhaust-tube *d*, by which the said breast-cup can be nearly filled with milk from the breast without allowing any portion of its contents to flow into the chamber of the pump, which prevents the necessity of frequently removing the cup from the breast. Also, the arrangement of the said breast-cup and curved exhaust-tube with the diaphragm pump, by which the patient can use the instrument without the aid of an assistant.

No. 11,624.—NOAH WARLICK.—*Improved Horse-Shoeing Apparatus.*—Patented August 29, 1854.

Claim.—The head-piece C, with an adjustable slide *b*. These are supported on a standard A, which enables the operator to shoe a horse without supporting the animal's foot between his knees in the usual manner.

No. 11,625.—C. P. S. WARDWELL.—*Improved Machine for Cutting Tenons.*—Patented August 29, 1854.

The novelty and utility of this machine consist in the peculiar arrangement and combination of its several main parts—which are, the vertical saw D, for squaring off the end of the rail; vertical saws G G, for forming the tenon-shoulders; and the horizontal saws N N, or saws and cutters R R combined, for cutting the tenons; thus dispensing with the use of a separate machine for cutting the shoulders. The entire process of squaring the end of the rail, forming the shoulders, and cutting the tenons, (and there may be more than one on each end of the rail,) is plainly shown in figure 1 of the annexed drawings, the rail being shown on the feed-carriage B by broken lines *x x*. The motion of the feed-carriage is continuous until the tenons are completed; and when the tenons are cut on one end of a rail, it is reversed, the feed-carriage returned to its former position, and the tenoning of the other end is commenced.

Claim.—The manner herein described of combining and arranging the squaring-off saw D, vertical shoulder-saws G G, and horizontal tenon-saws N N, or horizontal saws and cutters combined, so as to constitute a machine which is capable of completing the tenon or tenons before the rail is discharged, substantially as and for the purpose herein described. The manner herein described of combining and arranging the saw-arbor H or O, swinging-frame J or P, slotted segment L or Q, lever K or *h*, and set-screw M or *f*, for the purpose of facilitating the operation of adjusting the shoulder-saws G G, or tenoning-saws N N, substantially as herein described. The employment of one or more cutters between the horizontal tenon-saws N N, in combination with the shoulder-saws G G, for the purpose of cutting two or more tenons on each end of the rail at one operation, substantially as herein described.

No. 11,626.—JOSEPH D. WEST.—*Improved Hydraulic Ram*—Patented August 29, 1854.

This invention dispenses with springs or weighted valves. The water flows through one conduit until near the ram, when it branches in two opposite directions. The valves H and H^1 are rigidly attached to the rod G, and are operated alternately by virtue of the additional momentum alternately imparted to the respective columns of water D D^1, due to the velocity of each column, momentarily in motion, while the other column is, for the same length of time, at rest. The figure illustrates this. The water escaping at *b* generates velocity in the column D, the column D^1 being at rest. Of course the velocity of D will quickly generate a momentum which will overcome the weight merely of the equal column at rest on D^1, thereby closing the valve H^1 and opening H.

Claim.—Valves so constructed as to be operated on those principles of hydrodynamics involved.

No. 11,627.—JESSE WHITEHEAD.—*Improvement in Counter Twist-Speeders.*—Patented August 29, 1854.

The nature of this invention consists in constructing the speeder with an additional shaft for driving the bobbin elevated above the ordinary bobbin-shaft, and in combining with this upper bobbin-shaft curved bobbin-bars overlapping the lower tiers of bobbins, and by their curved form permitting the removal of the lower bobbins when filled.

Claim.—The combination of the upper bobbin-shaft *b* with the curved overlapping bobbin-bars *p*, arranged and operating as described, and for the purposes specified.

No. 11,628.—JOHN WOOTTON.—*Improvement in Nail Machines.*—Patented August 29, 1854.

Claim.—The two pairs of segmental rolls I I^1 and N N^1, combined, arranged, and operating so that the first pair bring the spike nearly to the desired form, and the second complete it.

No. 11,629.—DANIEL HALLADAY.—*Improved Governor for Wind-Mill.* Patented August 29, 1854.

Figure 1 is a side elevation; figure 2, a front view of the wings or sails.

Claim.—Attaching the spindles *b* of the wings or sails F to a sliding-head G, by means of the lever *f h*, or their equivalents, and operating said head G by moving the lever H, or its equivalent, and a governor of any proper construction, for the purpose of giving the desired obliquity to the wings or sails, and thereby insuring an equal motion and power during the variable velocity of the wind.

No. 11,630.—T. C. VICE.—*Method of Operating Wind-Mill Sails.*—Patented August 29, 1854.

Claim.—"Clothing and unclothing wind-mills while the sails are in motion or at rest, by means of an iron rod passing through the main hollow vane-shaft, in combination with bevel-gear and pinions, a pinion being attached to each of the *reefing rollers* on the arms," thus operating cords and securing the sails to said rollers by means of the iron rod passing through the hollow shaft.

No. 11,631.—SIDNEY S. TURNER, assignor to ELMER TOWNSEND.—*Improvement in Sewing Machines.*—Patented August 29, 1854.

Claim.—Constructing the feeding wheel in the form of a toothed annulus or ring-gear F^1, or the equivalent thereof, and connecting it with the feeding-shaft D by a universal joint or ring, and two sets of journals *a* a^1 and *b* b^1, applied together and made to operate as specified, whereby the cloth can be readily turned in any direction, without the necessity of lifting the presser or presser-wheel.

No. 11,632.—PHILEMON A. MORLEY.—*Improvement in Glass Lanterns.* Patented August 29, 1854.

This invention renders unnecessary the separate construction of the lamp or oil-pot and the lantern or case, being moulded in one piece. A hinged top gives access to the interior, and is arranged for ventilating the lamp in a suitable manner. A spring-catch is used to detain the cap to the body of the lantern; and the base being imperforate, avoids the waste and dirt consequent on an overflow of oil.

Claim.—A lamp or lantern of any desired configuration, when made of glass and in one piece, substantially as described.

No. 11,633.—DEXTER H. CHAMBERLAIN, assignor to WM. R. MESHURUL.—*Improvement in Lard Lamps.*—Patented August 29, 1854.

The wick-tube F is placed on one side, and when heated melts the concrete matter contained in the vessel A. It is pivoted, so that the last remaining portion can be consumed by lowering the burner, a lamp-screw being used to retain it at any desired angle.

Claim.—The above described improved lamp, (for burning lard or concrete fatty matter,) made with an arrangement of the wick-tube, the lard reservoir, and the supporting bifurcated stand as described, and with the reservoir applied to the stand, so as to turn on centres and be fastened in position, under any inclination or elevation of the wick-tube, as specified.

No. 11,634.—J. E. CROWELL, assignor to J. E. CROWELL, E. SMITH, and C. T. STICKNEY.—*Machinery for Dressing Ship Timber.*—Patented August 29, 1854.

Two or more rotary cutters B E dress the timber as it passes between them.

The manner of adjusting the carriages H I, as they carry the timber beneath the cutters, constitutes Mr. C.'s invention. Each rail of the carriage (four in all) is elevated or depressed by a screw-rod M at each end, moved by spring-gearing P P, R R. The carriage (one rail is seen at H^1) is moved by an endless screw and gear suitably connected with the driving machinery; and either end of either rail may be adjusted by throwing its pinion, etc., in or out of gear independently of any other end. This enables the operator to give any desired shape to the piece as it approaches the cutters. This is the substance of Mr. C.'s claim.

No. 11,635.—THOMAS WORRALL, assignor to MIFFLIN PAUL.—*Improved Multiform Moulding-Plane.*—Patented August 29, 1854.

The figure 1 is a perspective view of one of these planes with the brass plate attached, to which is screwed the multiform slides that are designed for tonguing, grooving, mouldings, fillets, &c. A represents the wooden part of the stock, and B the brass plate with its set-screws

i. C is the guide, which fits into the plane-stock at *g*. At *b* is shown the form of the aperture into which each slide *e* (containing the bit designed to be used) is inserted.

Claim.—The slide attached to a plane by means of plates and screws, which will make the plane capable of working all kinds of grooves, fillets, mouldings, &c.

No. 11,636.—WILSON AGER.—*Improvements in Mill-Stone Dress for Cleaning Grain.*—Patented September 5, 1854.

Claim.—The herein described dress, consisting entirely of cracks, having inclinations as shown in the drawings for causing reverse draughts, so as to turn the grain and revolve it both on its longest and shortest axis, for the purpose of cleaning and scouring said grain.

No. 11,637.—WM. H. AKINS.—*Improvements in Bolting Machines.*—Patented September 5, 1854.

The arrangement of parts set forth in the claim is designed to produce more rapid rotations, and a greater amount of vibration at the same time, than is common to this class of machines.

Claim.—The connecting-rod M, in combination with the vibrating bracket H, and pulley B^1, over which belt L passes, said bracket being secured to axle B, for serving the double purpose of giving the bolt a short, quick, horizontal vibrating motion, and at the same time giving it a rotary motion; the whole apparatus being arranged as described, and operating in the manner set forth.

No. 11,638.—BENJAMIN BRAY.—*Improvement in Spring-Rollers for Window Curtains, &c.*—Patented September 6, 1854.

This is a hollow curtain-roller, made to enclose a spiral spring, which winds up as the curtain is run down, and thus balances the weight of the latter in every position. The roller is formed to admit within it a sufficient length of spring to bring its variations of tension within the limits of the weights of curtain run off, and thus to produce a balance between the weight of the curtain and the force of the spring in every position of the apparatus, or so nearly so as to enable the latter of itself to maintain every position when the friction of the movement is increased by the addition of a weighted bar at the lower end of the curtain.

Claim.—Having thus fully described the nature of my invention, what I claim is, providing the tubular or hollow curtain-roller with a long spiral spring within it, when said spring is used for the purpose not merely of drawing up the curtain by its recoil, as that is not new, but of balancing it in any position in which it may be placed, substantially as herein described.

No. 11,639.—Charles Clareni.—*Improvement in Attaching Pulleys to Shafts.*—Patented September 5, 1854.

This improvement consists in introducing a cylindrical key into a tapering recess in the eye or hub of the wheel in contact with the shaft, so as, by torsion in one direction, to wedge the two together.

Claim.—The method of fastening pulleys to shafts, by having a cam cavity or recess in the pulley, and introducing therein a roller, substantially as set forth.

No 11,640.—John Clark.—*Improvements in Chimney-Caps.*—Patented September 5, 1854.

Disclaiming the invention of chimney-caps with pendant valves, I claim constructing chimney-caps having balance compensating valves E E E, with lever *e*, and weight D, or its equivalent, together with the valve opening at the top, whereby is prevented the undue accumulation of smoke within the space *d*, thus affording the speedy escape of the smoke, in its ascent upward through the chimney, substantially as set forth.

No. 11,641.—Charles H. Dana.—*Improvement in Seed-Planters.*—Patented September 5, 1854.

The machine consists of two parts, A and B, which perform the operation of planting by a sliding movement upon each other, there being attached to the B part a reservoir of seed C, and a brush *f* to prevent the seed from falling directly into the ground, except what is required to fill the notch *e*. The operation is as follows: The operator, grasping the handle A, sets the bottom of B part upon the ground. The pressure upon A sinks its sharp point *c* into the ground, while by the same movement the notch *e*, already filled, is carried down below brush *f*, and the seed falls into the ground as the handle A is raised, and the receptacle again fills with seed, preparatory to the next operation.

Claim.—I claim: 1st. The planter, employed and operating as described.

2d. The triangular measuring cavity *c*, combined, arranged, and operating as described.

No. 11,642.—Louis Daser.—*Improvement in Seed-Planters.*—Patented September 5, 1854.

The machine is a hand-planter, composed of handle B, fixed to seed-box A, and planting rod or staff *b*, sliding in tube *a a*. The instrument being forced into the ground to about the mark *j j*, the charger *f* of staff *b* rises upwards opposite the opening *c*, and receives a charge of seed; while at the moment when the operator raises the instrument, the spring *g*, pressing against staff *b*, carries the latter down below tube *a a* before

the latter is out of the ground, thus discharging the seed into the hole prepared by the impression of the instrument. The figure shows the instrument in the act of being raised out of the ground.

Claim.—The seeder *b*, cut *f*, and slot *e*, in combination with the drill *a a*, the flared hole *c*, spring *g*, and cylinder A, substantially in the manner and for the purposes set forth.

No. 11,643.—AUGUSTUS M. EASTMAN.—*Improvement in the Manufacture of Ribbons of Velvet.*—Patented September 5, 1854.

The nature of this invention consists in forming upon the edge of narrow strips of velvet an artificial selvage, by means of a brush filled with any semi-fluid adhesive material, which is made to act upon the edges of the strips of velvet.

Claim.—Forming upon the edges of strips of velvet a firm artificial selvage, by means of a brush or cushion, charged with a suitable adhesive compound.

No. 11,644.—WM. H. FOSTER.—*Method of Reefing Topsails from Deck.* Patented September 5, 1854.

Claim.—The jackstay A and batten B on the yard, with the main and minor reefing-lines, furling or spilling lines N, for manœuvring the dogs'-ears, with the necessary sheeves and blocks.

No. 11,645.—JONATHAN C. GINN.—*Machine for Worming Rigging.*—Patented September 5, 1854.

Claim.—The combination and arrangement of the helical traveller Y at the end of the bore or passage D, the box A, and the bobbins or reels B; the whole being constructed as described, and composing a hand-machine for the purpose specified.

No. 11,646.—GEO. W. GRISWOLD.—*Portable Door-Fastener.*—Patented September 5, 1854.

Claim.—A fastener made in one piece, and having two or more arms at right angles to each other, with one serrated and one smooth edge, so that when either is introduced into the crack between the door and its frame, and turned one quarter round, its teeth will be forced into the frame and the door secured.

No. 11,647.—JOHN HINDE.—*Hemp and Flax Brake.*—Patented September 5, 1854.

This invention consists in passing the flax or hemp between a ribbed sheet, or endless apron, and a series of fluted rollers, which have a rolling and vibrating motion over its surface.

Claim.—The employment of a moving ribbed sheet, or endless

apron F, with a series of rollers N N, working upon it, substantially as and for the purposes described. Also, giving to the said rollers a reciprocating motion backwards and forwards upon the sheet or apron, substantially as set forth.

No. 11,648.—M. G. HUBBARD.—*Hanging Plane-Stocks.*—Patented September 5, 1854.

Mr. H. hangs his stocks *e* upon an axle at F, below the plane of the cutting-edge.

No. 11,649.—A. KENDALL.—*Machine for Riving Lumber for Shingles.* Patented September 5, 1854.

By means of a series of knives and devices, this machine is designed to rive four pieces at each stroke of the main driver. The knife J is on the carriage G, and cuts, on forward movement, a piece U for four shingles. This piece falls, as in figure, upon a spring-bed S, and is driven against the fixed knife P by drivers O, and its halves are deflected as seen at V V by springs d d^1 d^2 d^2, and carried forward by drivers K^1 K^1 against the knives W W, each of which halves its piece, making four in all.

Claim.—1st. The sliding-knife J, the brace-springs S, driving-arms o o^1, the upper arm being separated from the lower, and the planes e e, for raising the upper arm from the knife P while the lower arm passes under. The several parts named I claim, in combination, for the purpose of cutting a block from a bolt, and conveying it to the knife P, to be divided into two blocks, ready to be carried forward by the drivers K^1 K^1, to be again divided by the knives W W.

2d. The combination of the upper springs d^2 and e^1, the lower springs d d^1, knives W W, and the reciprocating drivers K^1 K^1, for the purpose of conveying the blocks divided by the knife P from it to the knives W W, by which they are again divided.

3d. The two side-pieces g g, provided with grooves or channels m m^1 and j^1, with the tumbler l; the middle channels m and j^1 being of such inclination that the drivers K^1 ascend in passing from the knife P to W W, and return by means of the tumbler in the channel j^1. The driver K^1 descends in passing from the knife P to W, and returns in the channel m^1, and is thrown up in place by the springs n. Also, I claim the combination of the grate-plates with the tumblers l and springs n, or other equivalent devices, for the purpose of giving the proper direction to the reciprocating drivers, in the manner and for the purpose set forth.

No. 11,650.—JOSEPHINE MORSS.—*Improved Driving Wheels of Locomotives for ascending Inclined Planes.*—Patented September 5, 1854.

The nature of this improvement consists in having the opposite driving-wheels mutually inclined, or set at an angle upon the axle, (the said wheels being sufficiently elliptical in shape, to be circular or cylin-

drical with respect to the axle,) and in making the tracks waved or serpentine, to correspond with the running variations from a straight line, the object of the arrangement being to obtain a lateral traction upon the rails in ascending grades.

Claim.—The use or employment of inclined driving-wheels upon locomotive engines, or their equivalents, in combination with the curved rail *c*, constructed and arranged substantially as described.

No. 11,651.—THOS. M. POWELL.—*Improvement in Ice-Cream Freezers.*—Patented September 5, 1854.

A is the metallic vessel containing the cream, and is surrounded by an ice-vessel K, and is further divided within by an annular ice-vessel C, giving three freezing surfaces. G is a perforated conical-shaped ring for stirring the cream in the annular part of the cream-vessel, and scraping off the ice as it forms upon the freezing surfaces; H is a similar scraper and agitator, formed for the central compartment of the cream vessel.

Claim.—The manner herein described, and shown in the drawing, of constructing ice-cream freezers with three or more cylinders A B C, arranged as described, for the purpose of more speedily and effectually freezing cream, as herein set forth.

No. 11,652.—CHARLES ROWLAND.—*Improvement in Tables.*—Patented September 5, 1854.

This table is provided with ways *e e*, in which the end *i* of the legs c^1 slides, attached to a seat *f* and back *m*, supported by the standard *d*, on the lower end of which is placed a caster *n*. When the table is in use the seats are withdrawn from beneath it, the legs c^1 constituting a support for the table; when not in use the seats are shoved beneath it, the back *m* forming an ornamental leaf, as well as a support to the table.

Claim.—I do not confine myself to the precise construction herein set forth; but what I do claim is constructing the supports of the table so as to form seats, capable of being closed and withdrawn, substantially as and for the purposes herein fully set forth.

No. 11,653.—BRADFORD A. RUGG and EZRA H. BENJAMIN.—*Machine for Feeding Paper to Printing Presses.*—Patented September 5, 1854.

It is well known, that if we place a number of sheets of paper in a pile, one above another, and roll them at one edge, the act of rolling alters the positions of the sheets, causing one to overlap another. Upon this principle, a frame constructed as shown in the sectional drawing, having two endless aprons *g* and *h*, rotated as shown, will feed the paper through the rollers *a b* at graduated intervals, as the sheets of paper overlap each other. A dropping-bar *o* is made to fall at intervals on the hinder part of the apron *g*, so as to hold all but the uppermost sheet

of paper, until it has passed through between the rollers *a* and *b*; thus, but one sheet of paper is passed at one time to the printing press.

Figure 3 represents the machine open to receive the paper.

Figure 1 represents the paper in the first of its passage forward.

Figure 2 represents the paper held by the intermitting bar, while one sheet is being carried forward to the printing press.

No. 11,654.—DANIEL WARNER, Jr.—*Improvements in Dressing Flax.*—Patented September 5, 1854.

The object of this invention is to perform at one operation the process of breaking, scutching, and heckling the flax.

Claim.—The construction and arrangement of the heckling and scutching drums—that is, drums having a series of heckling bars *b*, armed with teeth, set at an angle with the radius, in combination with the blunt-edged or scutching bars *d*, one above the other, with the centres of their shafts diagonally placed so as to cause the flax, in passing between, to be acted upon by both sets of drums.

No. 11,655.—GEORGE L. WILD.—*Improvement in Stringed Musical Instruments.*—Patented September 5, 1854.

The invention consists in providing a sliding support *f* to the turning-screw D *a* at one end, while the other end works through a fixed stud *d*; and as this arrangement is intended to tighten two or more strings at one time, it becomes requisite to tune by a separate screw *e*, in the bridge F, which regulates the bridle L which presses on the string B.

No. 11,656.—HENRY L. CLARK.—*Improvement in Doors for Baggage-Cars.*—Patented September 5, 1854.

This improvement consists in arranging the door of a baggage-car between the ways C C, hinged at *c*, and adjusted by means of springs J, levers G and S, rod H, and hand-lever I, so as to be held tightly in the recessed door-way, or, when thrown out by the action of said lever, to be easily slid to one side upon the stationary ways D D.

Claim.—Having the door placed between ways C C, which are secured to the side of the car by hinges *c c*, and forcing the door outward by the device herein shown, or its equivalent, so as to cause the outer ends of the hinged ways C C to be in contact with stationary ways D D, between which said door is shoved when opened, as herein described.

No. 11,657.—LEROY S. WHITE, assignor to himself, LEWIS WHITE, LYMAN WHITE, and A. G. STEVENS.—*Improvements in Argand Solar Lamps.*—Patented September 5, 1854.

Claim.—I do not claim the employment of a tube or passage descending through the burner, so as to admit air to the interior of the wick-tube and flame; but what I claim is the arrangement of the filling orifice and the air-tube leading out of the closed secondary oil and

carbon receiver or chamber B, under the wick-tube C; such arrangement consisting in placing the filling orifice G on the upper part and at or near one end of the lamp, as described, and carrying the oil-tube D in an inclined direction through the main oil-chamber A, and out of the top thereof, whereby the contents of the secondary oil-receiver may be emptied from the said receiver, and through the tube D, without danger of spilling the contents of the main oil-receiver out of the filling orifice thereof.

No. 11,658.—ALEX. H. BROWN.—*Improvement in Brick-Presses.*—Patented September 5, 1854.

The chief features of this machine are an arrangement of a chain of moulds B B, in connection with the plungers E and F, actuated respectively by cams on the shafts of the wheels L and L^1, so that when one of these moulds is filled with clay from the hopper D, it receives first from plunger E a partial pressure, and then passing under plunger F, it receives therefrom its final pressure; and a peculiar construction of the mould-chain B B, by which the bricks are presented to the attendant (while said mould-chain is passing over wheel C^2) in a manner to facilitate their removal.

Claim.—I do not claim the broad device of constructing moulds which close before receiving the clay, and open when discharging the brick; but do claim the peculiar construction of my moulds, as described and shown for this purpose, each separate frame or link in the chain of moulds forming a part of two moulds, the projecting-plate *c*, as the moulds pass over the first octagon C^1, closing so as to form the bottom of the preceding frame, and the side *a* closing against the ends *b b* of the preceding frame, so as to form a perfect mould, when the chain is horizontal, as the frames pass over the second octagon C^2, the side *a* and the ends *b b* releasing themselves from the plate *c* of the preceding frame, leaving the brick free upon the plate *c*, so that it may be easily discharged; the lugs *d* gearing with the octagons for propelling the moulds.

2d. I claim, for the purpose of compressing dry clay into bricks, the combination of the two plungers E and F with the cams; the cams revolving and the plungers moving in unison, the first cam on axis L having the longest radius, and causing the first plunger E to descend the greatest distance upon the easily compressible clay. The second cam on axis L^1, which actuates the plunger F, having a smaller radius than the first cam, so that the greatest force of compression is applied to the clay, already partially compressed, where the greatest power is required.

No. 11,659.—LEANDER W. BOYNTON.—*Improvement in Machines for Cleaning Wool.*—Patented September 12, 1854.

A hollow cylinder E, of wire-cloth, is placed in a horizontal position on a hollow mandrel or shaft G, in a vat C, containing two horizontal apartments, in one of which is placed the cleansing liquor, and in the other the rinsing water, for dyeing or rinsing, as may be desired; the cylinder E, containing the wool, is placed in the appropriate vat and

there revolved, the cylinder being provided with buckets *i* on its periphery, which, as it revolves, elevates and distributes the liquor or water over the wool in that part of the cylinder which, during a revolution, is not submerged at the moment in the liquor or water in the vat. When it is desired to dry the wool, the liquid is drawn off, and the cylinder revolved in a contrary direction from that given it during the process of dyeing. Hot air is passed through the wool by means of the hollow shaft, when it is desired to make the wool perfectly dry, an opening being left in the mandrel or hollow shaft for such purpose, inside of the cylinder E, in which the wool is placed.

Claim.—The combination of the cylinder E with the hollow mandrel G, when these are combined with the horizontal vat divided into two or more apartments, and the whole is constructed, arranged, combined, and made to operate substantially as herein described.

No. 11,660.—E. C. Bridgham and James M. Stewart.—*Apparatus or Turning the Leaves of Books.*—Patented September 12, 1854.

This apparatus is principally intended for the convenience of performers on musical instruments; by it they are enabled to turn the leaves of music-books by a touch of the finger, knee, or foot. The lever F may be connected to a pedal X by a cord V; the pawl G operates the ratchet-wheel H, and turns the pin-roller *m*, so that the fingers *i*, which have previously been adjusted between the leaves of the book, are made to change their position, and carry a leaf at each movement; the finger *i* is moved by the spiral-spring J, as shown in fig. 3. The numbers 1 to 8, on fig. 1, show an arrangement by which a touch of the performer's finger will turn the leaves in any desired order. Figures 2, 3, and 4 are double the size of fig. 1.

No. 11,661.—Daniel Carpenter.—*Improvements in Surface Condensers.* Patented September 12, 1854.

The improvement consists—

1st. In putting the tubes close together, by making the two ends of the tubes which pass through holes in the tube-sheet of a smaller diameter than the body of the tubes, and securing them in place by means of nuts tapped on to the ends thus reduced.

2d. In a guard-plate or plates with apertures, as shown, and between the exhaust-port and the sides of the set of tubes; and,

3d. In the employment of the outside clamp-bars, and interposed bars, grooved, to embrace the tubes, so that they shall be firmly held to resist all vibration, while the clamp and bars will act as diaphragms to direct the steam across the set of tubes.

No. 11,662.—Nathaniel Colver.—*Improvement in the method of Manufacturing Boots and Shoes.*—Patented September 12, 1854.

This improvement consists in constructing of one piece of wood the entire bottom A of a boot or shoe, and uniting it with an ordinary

leather upper by means of tacks, nails, or pegs. A groove or rebate B is formed around the upper edge of the wooden sole for the edge of the upper or leather to be nailed upon, except at the shank, where the leather is made to extend round and partly across the bottom.

Claim.—The construction of boots and shoes (with uppers as now constructed in the United States) with a wooden instead of a leather sole or bottom attached to the leather uppers, as above described, or in any equivalent manner for the purpose set forth.

No. 11,663.—JOHN B. CORNELL.—*Metallic Slat Shutter.*—Patented September 12, 1854.

This improvement consists in the manner of uniting the sheet-metal slats A A, by swaging the edges of the slats into forms of corresponding segments of circles *a a a*, and connecting them by means of hinged bars B B B, combined with said slats, and arranged in such a manner that the pivots *b b* of said hinges will be concentric with the segmental curves of the edges of the slats, and when the shutter is open the flat portions of said slats shall be directly in line with each other, substantially in the manner and for the purposes set forth.

No. 11,664.—WILLIAM CRAIG.—*Improvment in Oscillating Steam-Engines.*—Patented September 12, 1854.

The improvement consists in the steam-pipe or valve P, operated by means of the eccentric rod R for obtaining a double action, in combination with the follower F and trunnion, for the purpose of admitting steam into the face of the trunnion without regard to size of parts.

Also, in the mode of arranging the eduction T T, and induction-ports S S.

No. 11,665.—PERRY DICKSON.—*Improvement in Dressing Mill-Stones.* Patented September 12, 1854.

Claim.—Dividing the face of the runner and bed-stone into three circular courses of furrows, A B, B C, and C D; all the furrows in A B having the same draught, and having twice the number of furrows in B C that there is in A B, and giving these furrows the same draught in respect to themselves, but a different draught from the furrows in A B, in combination with the furrows in the third course C D, to operate as conveyors in the manner described, or any other construction substantially the same.

No. 11,666.—JOSEPH GATLEY.—*Valve or Piston for Rotary Pump.*—Patented September 12, 1854.

The figure illustrates this invention, which consists in placing the piston *b* within a sliding frame *a a*, fitted with friction-rollers, so that

when the shaft H^1 revolves, the two parts *a a* and *b*, constituting the piston, adapt themselves to the eccentric interior of the pump.

Claim.—The arrangement of friction-rollers in a sliding-frame *e a a*, in combination with the sliding-vane or valve *f f*, whenever used for similar purposes.

No. 11,667.—WARREN GALE.—*Improvements in Straw-Cutter.*—Patented September 12, 1854.

In this machine the knife *a* is carried by flange J, which revolves shaft H, and cuts against a piece of leather N, carried by flange M on revolving shaft L. The throat-pieces, *h i*, are adjustable by means of holes (with pins) 1 2 3 4 5 6, together with hinge *j*, and slot-hinge *k*. Now, if the throat be contracted, the two flanges grasp the straw-cutter at each revolution, and drag forward a shorter cut; but if the throat be expanded, the flanges seize the straw earlier in their revolution, and carry forward a longer cut.

Claim.—Flanges and throat as set forth; but disclaims mere adjustability of the latter.

No. 11,668.—A. J. GIBSON.—*Couplings for Vehicles.*—Patented September 12, 1854.

This invention consists—

1st. In the employment of a cylindrical bar of iron *a*, having a threaded bolt *b* projecting downwards, and working in a threaded cylinder *e* on the forward axle, for the purpose of excluding dust and preventing friction.

2d. In combination with the cylindrical bar of iron *a*, the manner of connecting the rear with the front axle, by means of a threaded bolt *g*, formed at the connexion of the rods or perches, and working in a threaded chamber *a*, substantially as set forth.

No. 11,669.—JOSEPH L. HALEY and SAMUEL MAXWELL.—*Improvements in Ship Ventilators*—Patented September 12, 1854.

By the co-operation of the double-spring *a* and stud *b*, the ventilator can be retained in any desired position.

Claim.—Constructing a ventilator for ship-frames, consisting of the tube A, cap F fitting thereon, sustained by means of the double-acting spring *a*, on the stem E, by which the cap is kept open, or securely closed when down, in the manner set forth.

No. 11,670.—SEYMOUR N. MARSH—*Truss for Hernia.*—Patented September 12, 1854.

This invention consists of a compound-pad, composed of an elliptical ring-pad B, surrounding a spheroidal ball-pad; which latter is adjustable relatively to said ring by means of spring D and screw E,

so that pressure can be made with either the ring or the ball, or with both, as may be desired. The truss-pad is especially designed for the treatment of inguinal hernia.

Claim.—I am aware that truss-pads have been constructed of two parts, a movable centre-piece surrounded by the body of the pad, the said centre-piece closely fitting into said body, and being attached to the latter by spiral or other springs. In those truss-pads, the centre piece is adjustable in relation to the body of the pad only by the degree of pressure applied to said body, and the consequent resistance of the abdomen of the patient. But what I claim as my invention is—

1st. The ring-pad, constructed as herein above described, to close the external and internal abdominal rings, by making pressure specially upon those parts, as herein above set forth, and not over the external surface of the canal.

2d. The interior ball-pad, combined with the ring-pad, substantially as herein described, for the purpose of producing upon the inguinal canal a pressure for the purpose of creating adhesive inflammation, which pressure is entirely independent of the pressure upon the ring-pad, and the consequent resistance of the abdomen of the patient, and which is capable of being regulated by a screw, or other equivalent means provided for the purpose.

No. 11,671.—J. W. MIDDLETON.—*Improved Method of Applying Heat to Dilate Gases for the Purpose of Elevating Water.*—Patented September 12, 1854.

This apparatus is well shown by figure. Mr. Middleton surrounds the air-chamber A by an air-tight jacket G, which confines the heat to the external surface of the air-chamber A. A series of flues E pass through the air-chamber. Ventilation is accomplished through holes *a a*, &c. The inventor alleges and claims this special method of applying heat as being useful in certain cases.

No. 11,672.—GILBERT MAYNARD.—*Corn-Sheller.*—Patented September 12, 1854.

In this machine, *a b* are two wheels nearly opposite each other, and on parallel axles, turning in opposite directions. The wheels are made adjustable, in relation to each other, by springs *o p*, so as to grasp an ear of any size. Crank *n* moves the machine, and the corn is fed in at ear-guide n^1.

Claim.—The applicant does not claim an adjustable guide, or two wheels, as such; but he does claim the arrangement herein described, whereby two shelling-wheels, with their axles parallel, turning in opposite directions, are made to operate on one ear of corn, the ear being fed in between said wheels, substantially as set forth.

No. 11,673.—JAMES MCGREGOR, Jr.—*Improvements in Ranges and Cooking Stoves.*—Patented September 12, 1854.

The claim allowed covers the juxtaposition of fire-box, ovens, flues, and water-table, for the purposes set forth.

Claim.—Having a flue, or flues, surrounding the oven, or ovens, for the purpose and in the manner substantially as above set forth.

No. 11,674.—ANDREW MAYER.—*Improvements in Regulators for Gas-Burners.*—Patented September 12, 1854.

Claim.—I do not claim the employment of a conical valve to regulate the flow of gas, irrespective of the peculiar construction of the said valve; but I do claim the employment, as herein described, of a hollow conical valve C, perforated at its apex, and having openings around its base, and being arranged with a box, which receives the gas through an opening under the valve, substantially as herein set forth.

No. 11,675.—JOHN W. MIDDLETON.—*Improved Apparatus for Distributing Fluids.*—Patented September 12, 1854.

The design of this invention is to overcome the inequality of supply from ordinary water-pipes, in certain cases; and the drawing gives a vertical section of the supply-pipe, reservoir, and gauge-pipe, as constructed by the inventor.

Claim.—The arrangement of a water-reservoir, and air-vessel B, between the service pipe *a* and the distributing cocks *e*, or near the latter; also, the vertical pipe, water and pressure-gauge C, to regulate the flow of fluids through pipes.

No. 11,676.—EPHRAIM MORRIS.—*Improvements in Means of Weighing the Cargo in Canal-boats, and other Vessels.*—Patented September 12, 1854.

The nature of this invention consists in so attaching a pipe in the vessel, that it shall be above the level of the water when the vessel is heavily laden, and of a sufficient length to include the water-level when the vessel is empty. In the figure, *a* denotes the bottom of the vessel, to which a pipe *c* and cock *b* are attached, communicating with the exterior water—the pipe being nearly closed, so as to allow the water to pass in but slowly: *c* is the vertical pipe; 3 is a movable thimble setting on to the upper end of the pipe, and fitted to receive a screw-socket *g*, through which a hollow rod *d* passes, terminating at the lower end as a plunger, and cup-leather 1, fitting tight to the inside of the pipe *c*; *e* is a glass tube, attached to the top of the hollow-rod *d*, which is provided with a bulb *f*, and hole 4, on one side.

Claim.—Determining the level of the water and the consequent weight of the cargo, by means of a plunger, hollow rod, glass tube and bulb, applied to the tube containing the water, in the manner specified.

Also, the adjustable socket *g*, with an index marked thereon, in combination with the hollow rod and plunger, whereby the apparatus is adapted to different boats of the same size, or to the same boat under various circumstances.

No. 11,677.—NEWELL NORTH.—*Improved Spoke-Machine.*—Patented September 12, 1854.

In the drawings, figure 1 is a perspective view of the machine; figure 2, a plan of the end of the carriage C, showing the index *g*, pawl 6, and the ends of the guides *m* and q^1. The nature of this improvement consists in planing spokes longitudinally, by means of three or more sets of revolving cutters, the spoke-timber being held by means of centres pressed into each end of the same, and these being fixed in a carriage, which brings the timber into contact with the cutters; and the cutters are guided by means of inclined planes, attached to the said carriage, for the purpose of giving to the spoke the required taper and form.

Claim.—The index *g* and cam-crank g^1, in combination with the forked centre, or holder, f^1, and the carriage C, or their equivalents.

Also, the combination of the handle and rod *j*, the lever *i*, the puppet centre F, the cross-bar G, which is adjustable by the screws *r r r*, passing through the slots in guides *m q* q^1, the same cross-bar being combined with the carriage-frame C and the guides *m q* q^1.

Also, the arrangement of the cutters *e* and *a*, with respect to the cutters *c*, for the purpose set forth.

Also, the support or standard K, and springs *t* t^1 and *u*, or their equivalents; and the combination of the set of cutters *c*, or any equivalent combination, for the purpose of planing two sides and one edge of the spoke with the same set of cutters.

No. 11,678.—WILLIAM E. OSBORN.—*Breech-Loading Cannon.*—Patented September 12, 1854.

This improvement consists in the peculiar manner of closing and opening the bore of a breech-loading gun, in such a manner that a tight joint is obtained by very simple and efficient means.

Claim.—1st. The eccentric or cam-shaped piece *d*, set in trunnions 1 1, so that the operation of rotating said breech-piece on its trunnions, by a lever or any suitable means, compresses the curved surface of said breech-piece against the rear of the bore or calibre of the gun, as specified.

2d. The mode of removing said breech-piece from the line of the bore or calibre of said gun, by rotating said breech in the reverse direction, causing the cam or projection 4, or its equivalent, to act as a fulcrum, on which said breech is lifted by the one operation of rotating the breech—the trunnions 1 1 sliding up the grooves 3 3, as specified.

3d. The construction and arrangement of the hammer *f* and nipple 2, whereby the hammer is cocked by its own weight, as specified.

No. 11,679.—JOSEPH PHARES.—*Improvement in Tailors' Shears.*—Patented September 12, 1854.

This improvement consists, first, in placing the rivet R outside the angle formed by lines continuing the cutting edges inward, so that the motion of any particular point (as *a*) on the cutting edge of the upper blade A, as it passes through the cloth, will be inward, and tend to draw the cloth in instead of pressing it out, requiring consequently less force for a given result than in common shears; and secondly, in the use of a lip *s*, or other projection, as a guide, against which the shoulder of the blade B may work, in order to steady the motion of the cutting edges.

Claim.—1st. The placing of the rivet R of Taylor's shears outside of the angle formed by prolonging the directions of the cutting edges, for the purpose of giving to the cutting-point *a* of the edge an oblique backward motion, thereby increasing the ease of cutting, diminishing the resistance to working the shears, and bringing the cutting points nearer the hand.

2d. Combining with this the guide S, or stud, set in one blade, working in a curved slot in the other, having a screw-thread cut on it, on which is placed a rivet-head nut or other equivalent device, for the purpose of steadying the motion of the edges, and more effectually securing them from spreading in working.

No. 11,680.—PHILANDER SHAW.—*Improvements in Sewing Machines.* Patented September 12, 1854.

The nature of this invention consists in an improvement in operating the feeding roller of a sewing machine.

Claim.—The combination applied to the shaft H, for imparting to it an intermittent rotary motion, so as to obtain the length of stitch as specified; such combination consisting of the cam F, the wheel G, the movable or sliding-box N, (or its equivalent,) and the spring W, applied together and to the shafts B and H, and made to operate substantially as above explained.

No. 11,681.—SAMUEL SHELDON.—*Improvements in Portable Grist-Mills.* Patented September 12, 1854.

The runner and bed-stone are both secured in metallic flanged caps; face of the stones vertical, spindle and driving-shaft continuous; a slide regulates the feed, and a stirrer prevents choking. The adjustability of the runner to the fixed stone is secured by slotted flanges on the metallic cap, which, when moved into position, is secured by bolts.

Claim.—I do not claim the securing of the stones in flanged heads or caps, as such has been done before. But what I do claim is securing the stationary stone to an upright flanged plate E, and the adjustment of said plate by means of slotted flanges and bolts, for insuring in a simple and effectual manner the parallelism of the faces of the

stones as hereinbefore set forth, when the same is applied to a mill in which the axis of revolution of the running stone is horizontal.

No. 11,682.—LORENZO SIMONDS.—*Plate for Artificial Teeth.*—Patented September 12, 1854.

Upon the main plate *a* is fixed a smaller plate *c*, leaving a chamber between the two plates. Spring *d* sustains plate *c*, which, by its elasticity, may be pressed down to diminish the capacity of said chamber, at the moment of inserting the plate into the mouth. Afterwards the spring expands the chamber, and by the increase of the atmospheric pressure the plate is held to the mouth.

Claim.—Attaching to an artificial palate an air-chamber constructed with a flexible elastic diaphragm, for the more effectual exhaustion of the air between the artificial palate and roof of the mouth, as herein above set forth.

No. 11,683.—DON CARLOS SMART.—*Improvement in Curtain Fixtures.* Patented September 12, 1854.

Claim.—I am aware that a centre-pin inserted in a socket made in the end of a roller, and resting against a coiled spring placed in said socket, has been employed in curtain fixtures. I therefore do not claim such, nor is it to be considered in any respect as a contrivance equivalent or analogous to my invention, either in construction or operation; for with my improvement applied to a curtain-roller, I am enabled to dispense with a balancing weight to the curtain, and to obtain any amount of friction on the centres or bearings that may be necessary to overcome the weight of the curtain, and sustain it at any desirable height or position between the limits of its movements. I am also enabled by means of my improvement to dispense with the usual socket-pieces, or bearings for the journals, that become necessary in other fixtures for curtain-rollers, and particularly when one of the journals is made movable against a spring, as above set forth; therefore, what I claim as my improvement is the combining the centre-pin of the curtain-roller with the roller by means of a screw, and making the pin with a head, by which it may be revolved, the same enabling me not only to dispense with the usual counter balancing-weight necessary for the window-shade or curtain, but to form in the window-frame the female centres or bearing holes by the pressure of the screw, and thereby to dispense with the usual socket-pieces generally applied to the window-frame for supporting the roller, the whole being essentially as herein before specified.

No. 11,684.—H. G. SMITH.—*Fire Engines.*

These engines are constructed with spring-brakes, as shown in figure. The *claim* covers so constructing them, or in any manner essentially the same.

No. 11,685.—HENRY W. ADAMS.—*Breech-Loading Fire-Arms.*—Patented September 19, 1854.

This improvement relates to that description of breech-loading fire-arms known as the "faucet breech," and the first part of the invention consists in attaching the common gun-nipple *g* to one end of the roller which closes the breech, and making a vent or priming-hole extending therefrom to the solid part of the roller, which covers and closes the end of the barrel, so as to convey fire from the nipple to the centre of the powder in the barrel.

Secondly. In forming a cavity *s s s* within the seat all around the roller, and only leaving bearings at the ends of the roller, and around the projecting end of the barrel, so as to reduce the friction, in the greatest possible degree, and to prevent the roller from sticking tight in the chamber by the packing around it of the condensed gas, or unconsumed part of the powder.

Third. In fitting the opening in the rear part *a* of the breech-supporter, with the tube F, which enters the spall *s s* between the breech-roller and its seat, and fits closely up to the roller, serving the double purpose of giving the roller a bearing opposite to where the force of the explosion of the charge acts upon it, and of preventing the escape of the fire or gas through the back of the breech-supporter.

Fourth. In the use of the chamber E, detached from the barrel and fitting into the breech-supporter, so as to be incapable of turning therein, but to be capable of being forced up towards or into closer contact with the breech-roller by the screwing in of the barrel.

The *claims* are in accordance with the above four heads of the invention.

No. 11,686.—ELLIOT C. BADGER.—*Improvement in Machines for Dressing Mill-Stones.*—Patented September 19, 1854.

The general character of the machine is sufficiently shown in the drawing. The chisel *u*, receiving its motion from the alternate action of the spring *n* and the cam H on the shaft E, and its apparatus, is supported by a frame G, at the end of slide D, which rests and moves upon one of the guides C C, the hole *r* of which encompasses the spindle. The guides C C have slots *x*, either straight or of any curve which it is desired to give to the furrow, in which a pin V plays; when, therefore, the guide is adjusted radially by means of a set-screw I, (a nut *i* upon which bites the projection *s*,) and the chisel-frame G is gradually drawn from the spindle by the handle *b*, the slot *x* in the guide gives the desired curve to the furrow.

Claim.—The guide C, with the narrow slot *x*, in a straight line or in such curve as it is desired to give the furrow, in which a projection V, from the frame carrying the pick, works, and by which the pick is guided as it is drawn out to cut the furrow desired, and this either with or without the thread-screw I, by which said guide is moved radially around the cylinder and spindle.

No. 11,687.—Wm. Black.—*Improvement in Generating Steam.*—Patented September 19, 1854.

Claim.—The mixing, by means of a revolving brush or equivalent, small drops or particles of water in the steam; also, immersing the ramming chambers in water or its equivalent, for chilling the saturated steam suddenly, and just before it is forced into the heated cylinder.

Also, forcing the highly saturated steam into the heated cylinders, in the manner set forth.

No. 11,688.—James S. Burnham.—*Improvement in Maize Harvesters.* Patented September 19, 1854.

The machine is mounted on a truck frame. The horizontal blade F F running across it, between the wheels E E, and anterior to the axle-tree B, has its edge inclined upward and forward, so that as the team goes forward the rows of maize pass on each side thereof, between the team and the wheel, thus being severed as the stalks meet the cutter-edge; arms G^1 G^1 of the horizontal reels H H receive the falling stalks and deposite them upon the jointed arms K K of the horizontal reach-piece A, from whence they are deposited in bundles upon the ground by a downward motion, communicated to arms K by lever N and rod M, at the direction of the operator.

Claim.—1st. The employment of the oblique self-adjusting, cutting, and sustaining platform G, having a flange *b* on its back edge, and cutters arranged on its front edge near either end (by which arrangement the cutters are caused to cut in an oblique upward direction, and the cut stalks can be sustained by the flange on the platform and prevented from falling on the ground before they are caught by the reels.)

2d. The employment of the horizontal collecting reels, made elastic, and of cima reversa shape, in combination with the guards I, oblique fenders L L, guides J J, and receivers or bundlers K K (intended to bring the stalks to a proper position for being severed, and after being severed to prevent them from falling crosswise the machine, and to be collected and held until a sufficient quantity to form a bundle has been cut.)

3d. The arrangement of the receiver arms or bundlers K K, moved by the shifting-lever N and connecting-rod M, for the purpose of readily effecting the discharge of the stalks when convenient, without the operator changing his position.

No. 11,689.—C. J. Conrad.—*Shingle Machine.*—Patented September 19, 1854.

The only device claimed in this machine is exhibited at *m*, where notches are at equal distances on one side of the frame, and on the other at unequal distances. This carriage, being operated by weights, is moved one notch forward, at each end, for each operation of the saw; and the obliquity thus given to the block, in reference to the saw, gives to each shingle its required taper. Of course these notches on

the carriage fit into corresponding catches or teeth on the ways of the frame-work.

Claim.—The claim is to this device for tapering the shingle.

No. 11,690.—JOHN DAVIS.—*Improvement in Telegraphic Keys.*—Patented September 19, 1854.

There is a key for each letter or symbol, and each key has a slot or groove through its entire length, in which is a sliding-bar B. This bar has a toothed rack at E; at one end, and just beneath the toothed rack, is a revolving toothed cylinder D, which extends under all the keys. When any key is pressed down by the finger, the toothed rack of its sliding-bar is caught by the revolving cylinder, which puts the bar in motion, and causes a series of notches and elevations *a b c* to act upon a bar G attached to the lever of the common break-circuit key. The relative lengths of the notches and elevations give the required combinations of lines and dots.

Claim.—I do not confine my invention solely to the producing of the dots and marks which Mr. Morse uses in operating his telegraphic register; any arrangement may be produced. Neither do I confine my invention to the operating of Morse's telegraphic register; it may be applied to any telegraphic registering apparatus where spaces, dots, long and short marks, are used for transmitting and recording information by telegraph. Neither do I confine my invention to the working of the respective slide with its pinion and rack; it may be operated by passing the slide against the shaft or roll—friction producing the same as the rack. Neither do I confine my invention to the spiral springs; any other may be used.

What, therefore, I do claim as my invention is the construction of a bank of telegraphic keys, as herein described, and operated by their respective pinions, or by a roll, with or without teeth; said pinions or rolls may be operated by clock-work, or by any known motor; and thereby operating the well known magnetic lever, as herein set forth; causing the connections of the battery-circuit to be completed and broken a succession of times by a single operation of the operator; said connections to be of a longer or shorter duration as the respective symbol on the respective slide shall indicate. Disclaiming any right to other telegraphic keys, and to other telegraphic operations for the producing of dots and marks.

No. 11,691.—HENRY EDDY.—*Improvement in Bee-hives.*—Patented September 19, 1854.

This improvement consists in metallic strips *o o* flanking the bee-opening *n*, attached to and rising above slide *m*, and fitting closely against the front face of the hive, which the patentee calls protectors; alleging to have discovered that strips of metals placed thus on the sides of a bee-hive have the power to prevent the escape of anima heat from the inside of the hive.

Claim.—The arrangement of metallic protectors in a movable slide or bottom, substantially as described and for the purpose set forth.

No. 11,692.—WILLIAM G. ELLIOTT.—*Improvements in making Slag Ware.* Patented September 19, 1854; in England, October 5, 1852.

The improvement refers to the manufacture of bricks, pipes, tiles, and other articles capable of being moulded from slag (or from any liquid mass anologous to slag) in a fused state; and consists in expelling the gases of the slag by piercing and pressure during the presence of the fused slag in the mould, and in subsequently subjecting the moulded slag to the action of an annealing furnace, all in order to prevent cracking or bursting of the product.

Claim.—This is confined to expelling the gases of the slag by piercing and pressure while in the mould. No illustration.

No. 11,693.—B. FULGHUM.—*Machine for Sawing Timber.*—Patented September 19, 1854.

This invention consists in placing a saw D in a jointed swinging frame C, which vibrates about an axle G, and adapts itself to the positions of the saw as it moves over or through the timber, so that the lumber is sawed with any required dimensions without moving the log.

Claim.—"I do not claim the principle of a saw moving over the log; but I do claim placing a saw D within a carriage C, attached to frames E F^2, (jointed and self-adjusting) operating as hereinbefore described."

No. 11,694.—WM. P_e GOOLMAN and S. MORRIS.—*Portable Staging.*—Patented September 19, 1854.

The nature of this invention consists in so connecting two platforms G G^1 on separate standards E E^1, that the operator on one of them can raise or lower both of the platforms simultaneously. Also, in hinging the rails of the connecting platform or bridge T, so that they may be folded to occupy less space in transportation.

Claim.—The mode of operating the same.

No. 11,695.—THADDEUS HYATT.—*Vault Lights.*—Patented September 19, 1854.

This improvement consists in the mode of making a vault-cover by the union of two metal pieces A A and B^1 B^1 B B B^1, the latter of which is formed as a grating, and the former is formed with an opening, whose area is at least equal to the combined area of all the openings in the grating, (the area of the one being covered over by the grate bars of the other,) in combination with a glass or layers of glass C, protected by the grating B B B, and covering the opening of the metal

frame in which they are set, substantially as described, and for the purpose of protecting the glass both from fracture and from being obscured by persons or vehicles passing over the vault-cover.

No. 11,696.—JAMES R. NAPIER and WM. J. M. RANKINE.—*Improvement in Caloric Engines.*—Patented September 19, 1854; in England, June 9, 1853.

The nature of the improvement consists in the adaptation of a heat-screen S, separate and distinct from the plunger P, which drives the air or other gas from the hot to the cold end of the receiver K, and *vice versa.*

Also, in the adoption of tubular receivers, for the purpose of heating and cooling the air by the aid of rod-shaped heat-screens or plungers, nearly filling the tubes and serving, by being moved out and in, to admit and expel the air and promote its circulation over the heated or cooled surface.

No. 11,697.—J. W. MIDDLETON.—*Hydraulic Ram.*—Patented September 19, 1854.

Mr. M. avails himself of the force of a current to operate a ram, adapted to this end. The principle being well known, it is only necessary to explain the figure. The current passing through the large pipe A closes the valves or jets *a*, and checks the column of water within the pipe, an instant; this, by reaction, opens the valves *v v*, and a portion of said column of water escapes through them into chamber Q; the valves *v v* then close, and those *a* open, and the weight *i*, which was partially raised by the closing of valves *a*, now drops to its wonted position, (since equilibrium is restored between the checked water and the water without the tube,) and this completes one operation, supplying one increment of water to the reservoir.

Claim.—The arrangement and construction of parts to effect this end.

No. 11,698.—WM. H. MORRISON.—*Revolving Fire-Arms.*—Patented September 19, 1854.

This fire-arm is of the description known as revolvers; and the invention consists in the peculiar arrangement of its several parts.

Claim.—1st. The arrangement of the turning lever L, and the manner in which it is made to turn the revolving cylinder E; and of the plate G behind the cylinder on which the turning lever operates.

2d. The arrangement of the levers *x* and *v*, and their combination with the catch *c*, (that arrests the revolution of the cylinder,) by which the catch is operated on; and the manner in which these levers are worked by the turning lever.

3d. The arrangements, substantially as described, by which the revolving cylinder is thrown out to the side, so as to clear the barrel, in loading, without detaching the former from the gun. (See figure 5.)

4th. The use of the cutter at the bottom of the bore of the barrel for opening the cartridges, substantially as described.

No. 11,699.—HENRY B. MYER.—*Mode of converting the backs of Car-Seats into Beds or Lounges.*—Patented September 19, 1854.

Claim.—The construction or formation of beds or lounges on the backs of railroad-car seats, by turning them up to and retaining them in a horizontal position, and so arranging the backs of contiguous seats that they may meet and remain in the same horizontal plane, by the methods herein described or by any other substantially the same, and which will answer the intended purposes.

No. 11,700.—A. N. NEWTON.—*Breech-loading Cannon.*—Patented September 19, 1854.

This invention, which is applicable mainly to cannon, but may be in part applicable to fire-arms of every description, consists: 1st. In constructing the breech with a hinged lip *d*, which fits to a recess in the chamber and receives the charge when the breech is drawn back, but forms part of the chamber when the breech is in place for firing; and which, when the breech is moving back and forth, is capable of a slight vibration, to compensate for any want of truth in the breech or its fittings, and to enable itself to rise from the floor of the recess in the chamber to be supported by a friction roller d^1 in running back and forth, but to bed firmly on the floor of the recess when the breech is in place for firing.

2d. In the method of operating the clamps G G to lock and unlock the breech, by means of the crossed levers or shears H H, the double-slotted lever I, and the plate or broad arm *q* on the transverse shaft E, all constructed, arranged, and operating as set forth.

3d. In moving the breech back and forth by means of arms *e e*, attached to the same shaft E, which is the first mover of the mechanism which actuates the clamps to lock and unlock the breech; the said arms entering recesses in the sides of the breech substantially as set forth.

4th. The attachment of the parts of the lock of the gun to the movable breech or carriage, substantially as described, whereby the movement of the breech is made to effect the cocking and setting free of the hammer to explode the charge.

5th. In so constructing the inclined way K on the gun-carriage, which actuates the arm W of the lock in cocking the hammer, that if the hammer escapes it will be prevented, by the arm W coming in contact with the said way, from striking the needle, or its equivalent, which explodes the charge, until the breech-pin has entered the chamber of the gun, substantially as described.

No. 11,701.—ISAAC PITMAN.—*Improvements in Lamps for burning Rosin-Oil.*—Patented September 19, 1854.

A perforated sliding ring may be so adjusted as to feed in or cut off the supply of air ascending through the cone to the wick, the latter being arranged, as stated in the claim, between two tubes of unequal height—the outer one being depressed.

Claim.—I do not claim the use of the ventilating ring to regulate the inner current of air of the burner, as claimed by Harvey Tomlinson in patent to him September 1, 1843; it being in my lamp of very little, if any, practical value, as may be seen by experiment.

What I do claim is the regulation of the outer current of air of the burner, by means of a sliding ring, or by substantially like means, the same in combination with the vertically stationary and constantly and unvaryingly exposed wick, setting snugly between two tubes of unequal height, as herein described and set forth.

No. 11,702.—MARVIN SMITH.—*Water-Meter*—Patented September 19, 1854.

This improvement effects the reversal of the movement of the piston without the assistance of valves, by a peculiar construction of piston, in combination with its partially reciprocal rotation about its own axis, at the end of each stroke.

The piston E has a recess-chamber F in connection with the inlet pipe and upper part of cylinder. This recess is so constructed as to allow the ingress of water above the piston, until the stroke is finished; at this moment the piston is caused to revolve about its own axis far enough to close this flow, and direct it (by means of a similar recess F^1, similarly constructed with regard to the *lower* part of cylinder) to the under side of piston, causing the stroke's recommencement, at the same time two such recesses G G^1 suffer the water to escape at each stroke of the piston.

The mechanism for imparting this partially reciprocating movement to the piston is seen in the figures. A tongue *m*, clamped to the rod, is turned with the rod, alternately to right and left, by the action of the weighted pivoted levers *k* k^1. The water forces the rod up, and the tongue *m* bears against the lever *k*, thus separating the two, *k* and k^1, until that stroke is finished; the weight then forces the tongue past a guide *g*, against which it bore in ascending, and the lever k^1 then falls against the tongue and keeps it against the guide on its opposite side, until it arrives at the end of down stroke, when it is again pushed into its normal condition.

No. 11,703.—W. G. STERLING.—*Improvements in Counting-Machines and Machines for indicating Motion.*—Patented September 19, 1854.

A ring A is cut with a screw-thread, upon which works a revolving screw-nut C, from which the ring receives a slow motion like the circumference of a rotary wheel. C receives its motion from any prime mover, or counter, whose motions are to be indicated, as, for instance, a carriage-wheel. The outer circumference of the ring A is removed, so as to leave a smooth surface upon which may be laid down suitable graduations, to give the required indication of number, or motion, or distance, which graduations are read through an opening in the case or guide, in which the ring is enclosed.

Claim.—I do not claim the revolution of a ring by means of cogs working in a screw or spiral commonly termed a tangent-screw.

But what I do claim as my invention is the combination of the revolving endless screw marked with figures on its surface, as above described, with the stationary toothed nut, with a female screw in its centre, fitting the screw on the revolving ring in the manner set forth, for the purpose of causing the revolution of said ring, as above described.

No. 11,704.—JOHN TAPLEY.—*Pumps.*—Patented September 19, 1854.

Claim.—The arrangement of two cylinders A B in a right line, connected by a frame G T, and fitted with valves, stuffing-boxes, and a tubular plunger H working in both, and with a valve K in its middle; the plunger and each of the cylinders being made in two pieces, at the junction of which is a valve, so that without separating the cylinders and plunger, or dismounting either, either valve or packing may be easily gotten at for repairs, etc.

No. 11,705.—W. THORNLEY.—*Safety-Washer for Wheels.*—Patented September 19, 1854.

The nature of this invention consists in so arranging a washer between the hub and linch-pin, as to prevent its wearing or coming out.

Claim.—The washer C, provided with flanges D D projecting, at right-angles from its face, outward over the linch-pin F, in connection with the stop or stops E E projecting in the same direction, and extending from the inner diameter of said flange towards the centre of the washer; also, the cap with the stop or stops E E, as described.

No. 11,706.—JOHN J. WEEKS.—*Improvement in Sausage-Stuffers.*—Patented September 17, 1854.

This machine consists of a stationary hollow cylinder A, provided with a stand to rest upon, B, and a tangential spout C, and with a feed-passage and hopper D. A shaft E is arranged inside of the cylinder, eccentric to the axis of the same, having sliding-plates so arranged as to force the sausage-meat out of the cylinder into the spout. A tube is placed on the spout for receiving the case or gut, which tube has an air-passage extending from its front to its rear end, so that the air can escape while the case is being filled. A swinging arm K extends from the cylinder, which supports a shaping or protecting tube L, through which the case or gut passes while being filled; this tube serving to protect the case from unequal pressure, and give it the proper even shape as fast as it is stuffed.

Claim.—The arrangement of the adjustable shaping and protecting-tube K, in combination with the filling-tube, substantially as and for the purpose described.

No. 11,707.—A. WINTER.—*Machine for Sawing Wood.*—Patented September 19, 1854.

A series of endless chains D carry hooks E^1, which bring the wood in contact with any number of circular saws I, from which the pieces drop beneath the machine by their own weight.

Claim.—The combination of endless chains thus provided with circular saws.

No. 11,708.—LOREN J. WICKS.—*Improved mode of Operating Guide-Rollers and Feed-Clamps in Sawing-Machines.*—Patented September 19, 1854.

This improvement consists in rendering the feed-clamps and guide-rollers of sawing-machines for re-sawing self-adjustable, by means of pinions and racks, arranged as specified. Figure 3 is a plan of the machine. Figure 2 is an under view of the guide-rollers, showing the segment-racks and pinions by which they are adjusted.

Claim.—Connecting the two clamps *u u* of each pair together, by means of the racks *x x* and pinions *w w*; one clamp of each pair being made adjustable, and connecting the guide-rollers G G together by means of the segment-racks *j j* and pinions *k k*; the rollers, racks, and pinions being secured or attached to a movable or jointed frame F.

No. 11,709.—BENJAMIN F. UPTON.—*Apparatus for Polishing Daguerreotype Plates.*—Patented September 19, 1854.

The buffer A is supported on two rockers B C, to which a rapid vibrating motion is given by means of a band and pulleys, which, turning the crank I, produce, by means of the pitman G, the desirable parallel motion of the buffer A.

No. 11,710.—ABNER WHITELY.—*Improvement in Grain and Grass Harvesters.*—Patented September 19, 1854.

The improvement and claims consist in—

1st. A reel *c c c*, having on one of its blades a swinging rake O, suspended in *g g*, whose ends pass between and are combined with ways or guides *q q*, for the purpose of not only delivering the cut grain at the rear of the platform, but also better directing the standing crop to the cutters 3.

2d. The latch *f*, with appendages *l m n*, to be set in motion from the driver's seat C, for the purpose of interrupting the action of the rake. (and thus causing it to gather more or less grain when set in action, or to gather it at the moment when there is enough of it on the platform to give a full sized sheaf).

3d. Placing the vibrating knife-bar (3) and cutters thereon between alternately placed fingers (4 and 5), for the purpose of dispensing with the slot-guards, and sustaining the line of cut by throwing the action of the alternate shear-edge of the blade of said cutters on the upper and lower sides of the fingers.

No. 11,711.—WILLIAM H. AIKINS and JOSEPH C. BURRITT, assignors to WILLIAM H. AIKINS.—*Improvement in Calendar Clocks.*—Patented September 19, 1854.

This is designed for a perpetual calendar, as it is called, showing the year, the month, the day of the month, and the day of the week, all the required changes being made automatically for a long period of years. The days of the week are printed upon a cylinder F to be seen through an opening in the clock face. This cylinder is moved in the following manner: A snail-cam V is connected with a clock so as to revolve in twenty-four hours and raise a lever Y. This lever acts through the rod 31 upon an arm projecting from a disk 44, that plays freely upon the axis of the cylinder F, to which arm is also connected a pawl 41. This pawl, at its upper limit of motion, drops over one of seven teeth on the wheel 45. Before this takes place the extremity of the arm 44 has struck the detent 23 and lifted it above the range of the teeth on the wheel 45, the cylinder F in the mean time retaining its position by a slight friction. When the lever Y drops from the cam V, at the end of twenty-four hours, the pawl 41 catching upon the tooth of wheel 45, and impelled by the force of the reacting spring 5, carries that wheel and the cylinder F through one-seventh of a revolution, till the motion is arrested by the detent 23, which in the mean time has been dropped into its place.

The wheel L of thirty-one teeth, upon the axis of which is fixed the pointer for showing the day of the month, is operated in substantially the same manner as the wheel for showing the day of the week, the parts corresponding to those already described in the latter being the detent X, the pawl 37 with its impelling spring 7, and the rod 30, which raises the pawl 37, and has attached to it a pin 55, that in approaching the upper limit of motion strikes and lifts the detent 23. But there is added a contrivance for making the wheel L overleap at the end of the short months. To this end the pawl 37 admits of a range of motion equal to four spaces of teeth, or more, so that if one, two, or three teeth are omitted on the wheel L, their places on coming to the detent X will pass by till the wheel is arrested by the detent catching the next following tooth. The wheel L is provided with four circles of teeth, in one of which three teeth are omitted, in another two, in another one, and in another none. The detent works in the first mentioned of these during the month of twenty-eight days, in the second during the month of twenty-nine days, in the third during the month of thirty, and in the last mentioned during the month of thirty-one days. The movement of the detent from one of these circles of teeth to another is effected by a slotted lever Q, which embraces the detent, and is operated through the shaft P by a pin O resting upon the corrugated circumference of a revolving disk N. The different degrees of motion made by the pawl 37 and rod 30 under these different circumstances, are provided for by leaving the rod 30 free to slide upward in the lever Y by which it is raised. The disk N revolves once in four years, being moved through a forty-eighth of a revolution at the end of each month. The months are printed upon a cylinder G, which revolves in a year, and this cylinder and the disk N each derives its motion from the revolution of a cam

2 upon the axis of wheel L, by means of a mechanism like that which operates the wheel L or the cylinder F. The same may be said of the manner in which the cylinder H, on which is printed the year, derives its motion from the revolution of the cylinder G.

Claim.—1st. The arrangement of the four rows of teeth on wheel L, as shown in figure 4, in combination with the corrugated plate N, the detent X, and the arm O, the rocking-shaft P, and the slotted arm Q, or the equivalent of said arms and rocking shaft, and for the purposes set forth.

2d. Raising the click (or pawl) 37 over four or more of the teeth of the wheel L (when run down) on the first day of the month, thereby acquiring a retaining power sufficient to be used in the short months, thus moving the wheel L carrying the hand on the dial from the 28th day of February past the 29th, 30th, and 31st divisions of the wheel L to the figure 1, or the first day of March; those teeth (the 29th, 30th, and 31st) being removed, the detent X stopping the wheel L at the point marked 1 in figure 4, indicating the first day of every month, one tooth only being used, except at the last day of a short month, the rod 30 slipping through the end of the lever Y.

3d. We also claim the combination of the helix V, the lever Y, lifting-rod 30, the detent X, the pin 55, the click 37, the wheel L, and spring 7, and for the purposes described, that is, giving movement to the wheel L; the rollers F, G, and H being moved by similar devices.

No. 11,712.—Edward L. Seymour, assignor to D. B. Brown.—*Improved Gold Separator.*—Patented September 19, 1854.

Claim.—Making the receptacle of two, three, or more sections, arranged one above the other, perpendicularly, so that they may be slid off in succession, in a horizontal direction, to remove the refuse matter separated from the metal in the top section, and the other layers in the other sections, according to their respective specific gravities.

No. 11,713.—John Williams, assignor to F. Curtis & Co.—*Improvement in Calendar Clocks.*—Patented September 19, 1854.

The subject of this patent is the mechanism by which the wheel showing the day of the month is made to overleap at the end of the short months. The wheel *e* for showing the day of the month has thirty-one teeth, one of which is caught at each revolution of the twenty-four-hour wheel *b*, by a pin 6 projecting therefrom. But at the end of a short month, a lever *n*, which is carried by the wheel *e*, and plays upon a pin 25 projecting from that wheel, is caught by another pin 24 on wheel *b*, which pin 24 acting upon the lever throws wheel *e* forward more than one tooth. The lever *n*, however, moves freely before the pin without acting on wheel *e*, till it comes in contact with a pin 23, and according to the quantity of this free motion of lever *n*, will be the number of teeth by which wheel *e* is thrown forward. The quantity of free motion is determined by an arm O projecting from lever

n, and resting upon one or another of several pins 19, 20, 21, projecting from the face of a toothed wheel *l*, also carried by wheel *e*, upon a centre pin. For the month of thirty-one days the arm O falls entirely back between the pins 19, 20, 21. The wheel *l* has fifty-eight teeth, one of which, at each revolution of *e*, is caught by a fixed or stationary pin 26 at a time when lever *n* has fallen over upon pin 23, so as to leave the arm O clear of the pins 19, 20, 21. It will be obvious that the wheel *l* performs its circuit in four years.

Claim.—The wheel *l*, carried by the wheel *e*, and combined with the lever O and its stop 23, and the pin upon the wheel *b* to engage the lever O, the said wheel *l* having on its periphery forty-eight cogs or teeth, each cog or tooth representing a month, and having upon its upper face three pins 20, and a fourth pin 21; the three pins 20 marking the month of February for three successive years, and the fourth pin 21 the leap year; also, the pins 19 to mark the months of thirty days; the whole operating for the purposes described.

No. 11,714.—N. AUBIN.—*Improvement in Gas Generators.*—Patented September 26, 1854.

A steam generator E^1 connecting with a gas generating retort B^1 are arranged in separate flues, so that the supply of steam, at a high temperature, furnished to retort B^1 may be regulated by the supply of water furnished to retort E^1. The steam generating portion a^2 of the latter is filled with some porous substance to prevent the water from assuming the globular form while passing to the bottom. Vessel C^3 is the reservoir of the substance from which steam is to be generated, and which is applied therefrom to retort B^1 through a funnel C^1. The gas generator passes through funnel F into cooler F^1, which is provided with an inclined bottom, constructed in a coiled shape to run off the sediment, while the purified gas passes into distributing-pipe F^2.

The improvement and claim are confined to the gas generating retort B^1, with the diaphragm steam generating retort $a\ a^2$, charged with porous earth, pieces of brick, pumice-stone, or other porous substance, substantially as described, and for the purpose set forth; thus obviating an undue pressure of steam suddenly evolved.

No. 11,715.—FORDYCE BEALS.—*Repeating Fire-Arm.*—Patented September 26, 1854.

The nature of the invention consists in a simple device for rotating the cylinder of a repeating pistol.

Claim.—Rotating the chambered breech by means of a double ratchet B B attached to the trigger-lever C, (producing rotation by both forward and backward movement of said lever,) and acting on the side surface of the large diameter of cylinder at or near the ends thereof.

No. 11,716.—Edward Brown.—*Improvement in Porous Elastic Cloth for Gaiters.*—Patented September 26, 1854.

This improvement consists in cementing between two pieces of stocking fabric strips of India rubber, or a sheet of India rubber previously perforated, for the purpose of furnishing a material pervious to moisture. See figure.

Claim.—The above described elastic fabric, the India rubber being confined between two thicknesses of stocking-work, in the manner and for the purpose set forth.

No. 11,717.—S. Briggs and John G. Talbot.—*Neck-Yoke for Horses.*—Patented September 26, 1854.

This instrument consists in making two or more sections of a screw I I^1 on each of the rods which carry the end rings, H H, in combination with the nut J in the bar of the yoke, so that it may be used with one end short and the other long, or both ends either short or long, as may be necessary or desirable.

No. 11,718.—Gardner Chilson.—*Improved Hot-Air Furnace.*—Patented September 26, 1854.

This improvement refers to the tapering character of the radiators, whose internal surfaces reflect back the ascending volume of unburnt gases, so as to mingle with the current of heated air introduced by the channel under the plate *c*. There is also a new arrangement for agitating the grate and regulating the lower draught.

No. 11,719.—George Copeland.—*Harness Clasp.*—Patented September 26, 1854.

This invention consists of two plates, which are placed one in front of the harness shaft and the other behind it, and furnished with teeth, which pass between the heddles on the under or inner side of the shaft, and are so suspended from the strap that its tension draws them towards each other and causes the shaft to be confined between them.

Claim.—The clasp formed of two plates A A, having holes *b* b^1 to receive the strap, and catches or teeth *a a* to catch the harness-shaft or rail.

No. 11,720.—Joseph Albert Corwin.—*Improvement in Knitting Machinery.*—Patented September 26, 1854.

Figure 4 is a perspective view of one of the loop-forming tools on a magnified scale.

Claim.—The tool on which the loops are formed and interwoven, consisting of two pieces terminating in hooks or equivalents thereto, and so combined that when motion is given to said pieces, one of the

hooks shall seize the loop last deposited and retain it, while the other shall take up and cast off the loop of the previous course, whereby the two become intertwined and a netted fabric formed.

Also, the flange, or any equivalent for making a recess or groove upon the sides of the plate or shank of the horn, whereby a space is made for the point of the take-up hook to pass behind and seize the loop, as described.

No. 11,721.—JOHN DAME.—*Improved Parrel and Bow.*—Patented September 26, 1854.

This invention consists in the construction, arrangement, and combination of the upper and lower semi-bands A A and B B with the side-pieces and supporters D D, together with the parrel bow H, to which the yard is secured.

No. 11,722.—JOHN DRAYTON.—*Improvement in Bedstead Fastenings.*—Patented September 26, 1854.

The end rails are made with crooked or curved tenons on each end, which fit into corresponding mortises in the posts, as seen at *a*, so that these rails cannot be connected or disconnected with the posts without turning the posts, and of course cannot be disconnected while the side-rails are in their places. The side-rails are constructed with dowels or tenons at each end, fitting into corresponding openings in the posts, as shown in letter G. The side-rails and posts are drawn together by means of clamps and wedges, as shown in letters B and D, one of the ears of each clamp being fitted into a mortise made for that purpose in the face of the post, as shown at letter C, and the other ear entering a large mortise in the face of the rail, as shown in letter H; a wedge is driven through the rail and behind the last-mentioned ear, thus drawing the rail and post tightly together, and preventing the posts from turning.

Claim.—The manner of fastening the end-rails to the posts by means of the curved or crooked tenons, in combination with the clamp or wedge for securing the side-rails to the posts, as described.

No. 11,723.—ALEXANDER HALL.—*Improvement in Electric Clocks.*—Patented September 26, 1854.

The oscillations of the pendulum are maintained by means of two electro-magnets E E^1, which act alternately upon two soft iron armatures, which communicate their motion to a lever-beam H, which vibrates upon a pivot or centre-pin *a*. The beam H does not act upon the pendulum directly, but indirectly, through the medium of a slender spring *b*, which projects from H, and has its far extremity connected to the pendulum-rod G by a small rod C. When the galvanic current is changed from E to E^1, or *vice versa* H instantly makes its whole vibration without waiting for the pendulum. The latter is impelled simply by

the elastic force of the spring *b*, and is thus in a degree freed from the inequalities of the electric current. The vibrating beam H at the same time gives motion to the hands by means of two clicks *n n*, acting alternately upon a pair of toothed wheels *l l*, fixed upon a common spindle K. The circuit changes are effected by the motion of the pendulum in the following manner: The circuit of the electro-magnet is broken by a small space between the metallic pieces *j j*, and the closing is effected by a small metallic wedge *k* dropping between those pieces, while the closing of the circuit of E is in like manner effected by another small metallic wedge k^1 dropping between two other metallic pieces *j j*, on the other side, as shown in the drawings. The wedges *k* and k^1 are both fixed to the upper end of a crutch lever I, capable of vibrating upon a centre-pin, and this crutch-lever has at its lower end a wide loop through which the pendulum-rod passes. Towards the end of each oscillation the pendulum-rod strikes the loop and tilts the lever, which, carrying with it the wedges *k* and k^1, breaks one circuit and closes the other. The crutch-lever also carries at its upper end small pieces of iron, *m m*, which being attracted by the magnets J J, J^1 J^1, on both sides, cause either wedge *k* or k^1, when it falls between its corresponding metallic pieces, to maintain in contact therewith a gentle pressure.

Claim.—1st. Giving motion to the clock movement and to the pendulum by means of a beam H and spring *b*, said beam carrying and deriving its motion from the armatures of two electro-magnets E E^1, through which electric circuits are alternately closed and broken, and transmitting motion to the clock movement by means of clicks and ratchets, or their equivalents, and to the pendulum by means of the spring *b*, which serves to maintain its isochronous vibration without regard to the strength of the current, and thereby makes the clock keep perfect time, and serves to regulate a number of electric clocks, substantially as herein described.

2d. The manner of closing and breaking the circuit of the battery, so as to make it pass through one and the other of the electro-magnets alternately, by means of wedge-shaped points *k* k^1 of silver or other metal, which are caused to vibrate by the movements of the pendulum, and pass between small posts *j j*, of suitable metal, attached to permanent magnets, or other conductors, which form parts of the separate circuits through the two electro-magnets, as herein described.

3d. Securing the connexions which close the separate circuits when they are made, by means of two pieces of soft iron *e e*, which vibrate in connexion with the wedge-shaped pieces *k* k^1, or other equivalent means of closing the circuit, and are brought, when the circuit is closed, into contact or nearly into contact with permanent magnets J J, as herein fully set forth.

No. 11,724.—William Graham and Lawrence McLaren.—*Improvement in Railroad-Car Seats.*—Patented September 26, 1854.

This seat is constructed with a reversible back connected with the upper or seat part, which works upon a circle on the stationary base.

From the seat on each side leg-rests are suspended, which are connected with the base by means of double levers hinged at both ends, one end being fastened to the leg-rest and the other end to the lower edge of a cross-rail that connects the two sides of the base. These levers elevate or depress the leg-rests, as may be required for the comfort of the person occupying the seat, and are brought into play by sliding the seat over the circle on the stationary base.

Claim.—The levers E E, in combination with the leg-rests D D and the movable seat C, constructed and arranged substantially as described.

No. 11,725.—Moses E. Halsey.—*Improvement in Chair Frames.*—Patented September 26, 1854.

This invention consists in constructing the back of the chair so as to get the curves necessary to form an easy rest for the sitter, and yet to have the grain of the wood lie in the several directions requisite to insure the greatest strength the material is capable of affording.

The posts are made like the common chair below the seat, but above the seat the posts are carried about one-half the usual height. Here they are secured by mortise and tenon to two pieces, *b*, being supplementary posts which cross the upper ends of the first somewhat obliquely, and the lower ends of which are set in the back rail of the seat. The upper ends are curved inward, and connected by a piece *c*, forming a top rail.

A short rail *d* completes the frame ready for the usual "cane." By this construction, the grain of the posts may run nearly the entire length, while that of the pieces *b* may run in the direction of the length in that part of the pieces on which the greatest strain will come, viz: the central portion.

Claim.—The construction of the back of a chair in the manner described; that is to say, combining with each post, and with the back rail of the seat, a supplementary post, sustained and braced substantially in the manner and for the purpose set forth.

No. 11,726.—Aaron L. Hatfield.—*Improvement in Machines for Adding Numbers.*—Patented September 26, 1854.

This machine consists of a case A; an outer disk and lining B; an intermediate disk C; an upper disk D; a lower disk E; centre-pivot F; reckoning-lever G; and washer H. The disk D has numbers upon its outer edge commencing at 1 and running up to 100; the disk C has numbers upon its outer edge commencing at 100, and running by hundreds up to 10,000 or more; the disk B has numbers upon its outer edge commencing at 1 and running up to 100. The disks B C D, and the reckoning lever G, are fastened together by means of a pin *f* passing through the pivot F and the washer H. Steady-pins d^2 pass up from the lower disk E, through an opening in the centre of the disk C, into corresponding holes in the disk D; consequently there are no means of turning the disk C, except the friction consequent upon its

being placed between the two disks D and E, while the disks D and E move simultaneously as if they were made in one piece, by means of the steady-pins d^2.

Suppose the reckoning-lever G is turned against the stop *b*, as seen in fig. 1; through the slot g^1 may be read the figures 5,200 on the disk C, and 6 on the disk D. Suppose that it is desirable to add to this amount 15; in order to do so, the reckoning lever G is turned round until the slot arrives over the figure 15 on the disk B. The lever is now pushed back again to the stop *b*, and the spring-ratchet K catching in one of the sunken teeth on the disk D, carries the disk D with it and the lever; and when the lever arrives against the stop *b*, the correct sum will be observed on looking through the slot g^1, the amount now being before the eye 5,200 and 21.

On the lower side of the disk E, sunken teeth *e* are cut round the outer edge. Into these teeth a spring-ratchet *y* takes and prevents the disk E, and consequently the disk D, from moving while the reckoning lever G is being turned in the former direction, but permits the turning of the disk E and D when the reckoning lever G is moved in the contrary direction. The disk C, being pressed between the two disks D and E, would revolve with these disks by reason of the friction, were there no means to prevent it. To accomplish this, the disk C is bent towards its outer edge in the form seen in figure 2; and through the bend thus made, slots are cut entirely through, as seen at C in figure 3. Into these slots the spring-lever *x* (fig. 2 and 3) catches and prevents the disk C from revolving. In order, therefore, that the disk C may be moved at the proper time, some means must be devised for releasing the spring *x*. This is done by the cam *a* affixed to the bottom of the disk E. At every entire revolution of the disk E, the cam *a* comes round, and, striking the spring *x*, (as seen in fig. 2,) bears it down until the cam *a* has passed the spring *x*, when the latter flies up again and stops the disk; the movement of the disk C at this time is only equivalent to one notch, which exhibits a corresponding increase of 100 in the figures seen through the slot g^1; therefore, as often as 100 is reckoned by the disk D, the disk C is moved forward one notch, and in this manner the correctness of the sums reckoned is insured at the slot g^1.

Claim.—The slotted reckoning-lever G, with the spring-ratchet attached to it; the disk D, with its sunken teeth; the curved disk C, with the slots cut in the curve; the outer disk and lining B, with springs *x* and *y*; the disk E, with its sunken teeth *e*, cam *a*, and steady-pins d^2; the whole being arranged and combined in the manner and for the purposes set forth, or in any other manner substantially the same.

No. 11,727.—Thomas Hardman and Albert Vose.—*Whiffletree.* Patented September 26, 1854.

The nature of this invention consists in providing a whiffletree with a frog-shaped iron B^1, working in a slot B, and kept in place by means of a slide C or catch G, so as to prevent danger from the traces being accidentally detached.

No. 11,728.—HENRY HOCHSTRASSER.—*Improved Machine for Paging Books.*—Patented September 26, 1854.

The machine is constructed somewhat in the form of a table or desk A, with the bottom B extended to one side for the purpose of supporting a shaft M, and a spiral form C, containing the requisite numbers arranged on the upper and under sides of its periphery. The shaft has a spiral groove corresponding to the turns of the form C. Motion is given to the platens L K by the treadle G, which is returned after the impression is given by a counter weight under the table, and operates in its passage the adjustable escapement F^1, to bring a new set of numbers in place for the next impression. Thus, one motion of the treadle G causes the impression of two numbers on the leaves of the book placed on the table A; the platen K printing the even numbers, and L the odd numbers. Ink is supplied to the form on its forward movement by the rollers R R.

Claim.—A peculiar arrangement of the escapement F and roller E, which, by entering spaces in the form C, holds it while the impression is being made.

No. 11,729.—J. F. KEELER.—*Improvements in Scales.*—Patented September 26, 1854.

These improvements consist in the arrangement of the levers M^1 M^2 and R R^1, with connecting-rods P P, with suitable pin-joints, beneath the platform, for the purpose of raising the platform from off the frame G, and resting it upon the pins T, thereby preventing the levers and bearings from sustaining injury by jarring or straining when loading or unloading the scales. By turning the lever J to J^1, the platform descends with its load, and rests on the pivots H, ready to be weighed. Also, in attaching a spring-balance, as seen at *a*, to the platform-scales, for the purpose of readily determining the weight of an article as soon as it is placed upon the platform without moving a weight or poise.

Claim.—The raising or lowering of the platform or platform-scales simultaneously at all points, without regard to the position of the weight upon the platform; the weighing levers being retained in their proper places for weighing and preserved from swaying about, while the raising and lowering is being done, by the intermediate platform or frame G, substantially as described.

Also, the combination of the spring-balance with the platform scales, arranged substantially in the manner described, and for the purpose set forth.

No. 11,730.—CHARLES ROBERT LANDMAN.—*Improved Safety Lamp.* Patented September 26, 1854.

The novelty consists in so pivoting the disk-extinguisher (attached to a rod and spring running vertically through the lamp) upon the top of a vibrating weight, that the upsetting of the lamp detaches the pivot from its seat, and permits the spring to bring down the extinguishing-disk upon the flame.

Claim.—The use of the pendulum or swinging shaft, in combination with the balance-rod (having reacting openings in contact therewith) and camphene or other explosive fluid lamp, substantially as set forth.

No.11,731.—JOHN BAPTISTE LAVILLE.—*Improvement in the method of Felting Hat-bodies.*—Patented September 26, 1854. Patented in France August 20, 1852.

This invention consists in felting hat-bodies by causing them to pass between two series of rollers, when the two series are mounted in two separate frames, and operated by a continuous but slow rotary motion to carry the hat-bodies through between them, and a longitudinal reciprocating motion in the direction of the axes of the rollers; the two series moving in opposite directions for the purpose of felting, the lower rollers being combined with a trough containing hot water, so that, as they rotate, the lower part of their peripheries shall rotate in the hot water, which is thus carried up in sufficient quantity to keep the under surface of the hat-bodies moistened, whilst the upper rollers and the upper surface of the hats are moistened and heated by hot water which drips through small apertures in the bottom of another vessel.

Claim.—Arranging the two series of rollers *e e* and *v v*, mounted in separate frames *b* and *t*, held or pressed together as described, when the two series of rollers have a continuous rotary motion and a longitudinal reciprocating motion; the two series moving in opposite directions.

Also, in combination with the two series of rollers for felting hats, the mode of supplying hot water to the two surfaces of the hats, as they are passed through the machine; and the patentee declares that, in the above description, he understands the words "hat-bodies" to include every description of hats made from any matters capable of being felted.

No. 11,732.—PAUL MOODY.—*Improvement in connecting a Series of Car-Brakes.*—Patented September 26, 1854.

Claim.—The arrangement of bent levers B and D, at each end of every car, having their longitudinal arms projecting beyond the ends of each car, in such manner that, when the cars are coupled together, the faces of each opposing arm shall come into contact, and, without any fastenings, form a continuous mechanism for operating the brakes throughout a train, substantially as described.

No. 11,733.—SEPTIMUS NORRIS.—*Improvement in the Running-Gear of Locomotive Engines.*—Patented September 26, 1854.

Claim.—I claim in a locomotive engine, not having more than one pair of flanged driving-wheels, the combination with the driving-wheels of one or more pairs of flanged guide-wheels to keep or aid in keeping

the engine upon the rails, when the driving and guide wheels are so arranged that, while running upon a straight rail, the former shall carry the load, and the latter act as guides.

No. 11,734.—JOSEPH B. STOCKTON.—*Improvement in the Springs to the Knives of Straw-Cutters.*—Patented September 26, 1854.

This improvement consists in an adjustable double spring-guide E E for the knife F, secured to the front part of the frame A, and united at the top; the peculiar function of this spring being to keep the knife properly up to its work by pressing it with the force of both its sides against the steel-face B of the box, which forms a stationary cutter, and thereby prevent the substance operated upon from passing through uncut.

Claim.—The combination and arrangement of spring-guide E E, the moving knife F, and the fixed cutters B; whereby the moving knife F is held up to its work, whether the resistance opposed to it be at the middle, or at either end.

No. 11,735.—JOHN J. WEEKS.—*Improvements in Harvesters of Grain and Grass.*—Patented September 26, 1854.

The improvements refer to two parts of the machine, viz: a track-clearer, which is constructed in spiral form, and placed at O, at the side of the machine opposite the gearing, and revolves in the direction indicated by the arrow, thus throwing the grass out towards the centre of the frame A, and leaving a space free from grass for the driving-wheel B to run in, upon the return motion of the machine. The second improvement, as clearly indicated by the claim, is intended (in combination with the indentations *d d d* on fingers *a*, and with the range of movement of the sickle-bar so extended that, at every vibration thereof, two of the teeth *b b* pass the fingers *a*) to secure the severing of the grain, to facilitate it, and to obviate clogging.

Claim.—1st. The track-clearer, constructed in the form of a spiral.

2d. Having each tooth *b* of the sickle working through two of the fingers *a*, in combination with the bevelling of the cutting edges of every alternate tooth, so that, while one tooth shall have its cutting edges on its upper face, that next to it shall have its cutting edges on its lower face, as herein shown and described.

No. 11,736.—MOSES D. WELLS.—*Improvement in Washing-Machines.*—Patented September 26, 1854.

This machine consists in general outline of a circular tub, within which a circular rubber C operates upon the clothes, the periphery of the rubber constituting its operating surface, with elastic wings W placed between the periphery of the rubber and the sides of the tub, the position of said wings being adjustable for the purpose of regulating the pressure on the clothes, and for facilitating the removal of the same. The invention consists in constructing the rubber with a broad

flange *f* at the bottom, extending under the wings, for preventing the drawing of the clothes under the rubber by its rotation, for facilitating the movement of the clothes, and for permitting the dirt, grit, and other impurities to descend to the bottom of the tub, and be kept separate from the clothes during the operation of the machine.

Claim.—The construction of the rubber with a flange *f* at the bottom, substantially as and for the purposes hereinbefore set forth.

No. 11,737.—JOEL WISNER.—*Improvement in Washing-Machines.*—Patented September 26, 1854.

This machine in its general outlines presents a circular tub, within which the clothes are acted upon by a circular rubber C for cleansing them; an alternate, partial revolution being imparted to the rubber. The invention relates to the spindle upon which the rubber operates, and consists in constructing the spindle in two parts; the under, which passes through the rubbing-disk C, containing a socket D for the reception of the lower extremity of the upper portion of the spindle E, which passes through the lever *l* by which the rubber is operated. A compound spindle is thus formed, which not only steadies the rubber in its revolutions as well as a long spindle would if passed through the rubber and lever, but obviates the necessity of lifting the bottom of the rubber to the level of the top of the long spindle when the rubber is removed from the tub; as also, the liability of the rubber to bind upon the spindle and sides of the tub in lifting, when one long spindle is passed through the rubber and lever from the bottom of the tub.

Claim.—I do not claim the employment of a single spindle passing through the disk and operating lever.

But what I do claim as new, and my own invention, is the compound spindle D E, composed of the socket D and the spindle E, constructed, arranged, and operating substantially as hereinbefore set forth, for diminishing the amplitude of the vertical movement required in lifting in and removing the rubber, and preventing the binding incident to the said operations when a single spindle is used.

No. 11,738.—ARAD ALDRICH, assignor to JOHN L. COOPER and A. ALDRICH.—*Machine for Cutting Irregular Forms.*—Patented September 26, 1854.

Two expanding cutters A A are made to revolve on a shaft turned by pulleys D D. The work to be cut is suspended in a sliding-frame E, having pattern slots on its two sides, which guide the expanding cutters as the frame is moved across between the supporting posts H.

No. 11,739.—D. W. GITCHELL, assignor to JOHN C. WAGSTAFF.—*Improvement in the method of Uniting Bats in the Process of Manufacturing Seamless Felt Garments.*—Patented September 26, 1854.

This invention consists in temporarily uniting the surfaces or edges of woollen and other bats in the manufacture of felt garments, with glue,

or other equivalent cementing substance, preparatory to the final union by the felting process.

Claim.—The use of glue, or other equivalent cementing substances, substantially as specified, as a means of holding together the surfaces until they can be thoroughly united by the felting process, as described. No illustration.

No. 11,740.—Wm. P. McConnell.—*Improvement in Process of Making Illuminating Gas from Wood.*—Patented September 26, 1854.

The improvement consists in subjecting the gaseous products of the destructive distillation of resinous woods to a high degree of heat after they leave the retort. It is alleged that this process leaves no tar unconverted into gas, and promotes the condensation of the pyroligneous acid, thus affording a cheaper and better illuminating gas than could be obtained otherwise.

The process is exemplified by a receiver A enclosed within a receiver B, and the whole set in masonry. The space *e e*, between the two, serving as a flue for the gases generated in A to be exposed on their way, g^1 *h e*, towards *d*, to a degree of heat higher than that necessary to effect the decomposition of wood.

Claim.—The claim is restricted to the improvement herein described in making gas from wood.

No. 11,741.—Abner Chapman.—*Improvement in Paddle-Wheels.*—Patented October 3, 1854.

The claim allowed in this application covers a paddle-wheel composed of a double series of segments carried in opposite directions, and so arranged as to form continuous wave-lines, when this is combined with the unbroken open space between said series.

No. 11,742.—Charles M. Cresson.—*Improvements in the Form of Gas Retorts.*—Patented October 3, 1854.

The improvement consists in constructing the exterior walls of retorts of a number of longitudinal cells extending from end to end, or nearly so, made perfectly air-tight, and connected with each other, or with the central cell, in such manner that any gas contained or generated in either of them may be made to permeate all the other cells, either in succession or otherwise, and for any length of time necessary to obtain the most favorable resuks from the materials used, whether the same be mineral, vegetable, animal, or atmospherical.

Claim.—The construction and use of a gas retort with a cellular shell or exterior wall, instead of the usual solid shell; the cells being made to communicate substantially as specified, so as to form either one consecutive or several collateral series of communicating cells.

No. 11,743.—Victor Beaumont.—*Improvement in Steam-Gauge.*—Patented October 3, 1854.

The nature of this invention consists in using a flattened sphere A, figure 3, provided with a pipe B, through which the steam rushes inside the sphere, and to measure the pressure by the degree of inflation of the sphere. The sphere is fastened on a frame as indicated, figures 1 and 2 in C, by one of its depressed poles; the other pole plays by the action of the steam, and this play, properly measured, indicates the pressure of the fluid introduced into the instrument.

Claim.—I do not claim the elastic metallic disk, or combination of several of them, as I have learned lately it has already been used. But what I do claim is the peculiar variety of the shape of the so-called flattened spheres, consisting in conical surfaces combined together so that when the pressure is extending the one, it is compressing the other.

No. 11,744.—Thomas Batchelder.—*Machine for Manufacturing Frames for Wood-Saws.*—Patented October 3, 1854.

Claim.—"The arrangement and combination of a number of rotary chamfering cutters *m n*. the bridge-rest P, the side-rests or guides R Q, the back and fore stops Y Z, for the purpose of enabling a person to give each edge of a bar a tapering chamber of a determinate length and form." The piece T^1 is secured in a frame E, and passed over revolving cutters *m n*. The two spring-guides U V pressing it against the guides Q R; thus the curved faces and chamferings are formed. The round parts are formed by submitting it to an ordinary cutter at *e f*, and the circular saws M N form the tenons of the straining bar, the mortises for receiving which in the two side-pieces are formed by a revolving bar O.

No. 11,745.—P. S. Devlan.—*Improvement in Revolving Brick-Presses.*—Patented October 3, 1854.

This belongs to a description of brick-press in which the moulds are contained in a revolving wheel, each mould having its appropriate plunger; each mould *f* being filled from the hopper I. The clay receives a toggle-joint pressure from plunger G, which is actuated by a crank *c*, attached to an eccentric pin *b* on the stationary journal D, around which the mould-wheel revolves. The cam H is so shaped and placed as to thrust forward the follower *g* exactly as the plunger *e* retreats, so as to withdraw the brick from the mould under continuous pressure, and the cam K serves to draw the follower *g* into the mould again, leaving the brick upon the arm C, whence it is pushed off upon a belt or table by the arm J.

Claim.—The above described manner of actuating a number of plungers G G, to wit: by the cranks *c c* attached to the eccentric pin *b* upon the stationary journal or axis D, by which I am enabled to adapt the well known toggle-joint pressure, in a simple and yet effective manner, to a number of moulds in a revolving brick-press.

No. 11,746.—Richard Deering.—*Improvement in Machinery for Cutting and Dressing Stone.*—Patented October 3, 1854.

In the annexed figure the cutters are represented, which are revolving disks of sheet-metal, hung on the shaft C, and firmly secured by the hub *d*. The disks are formed of the sectors *g*, for the purpose set forth in the claim.

Claim.—Constructing a circular stone-saw of sectors of a circle, cut out of rolled or sheet metal, in such manner and in order that the fibre of the metal may be made to run radially through the centre, or thereabouts, of each sector, and thus present an end fibre cutting-edge all around its periphery, substantially as specified.

No. 11,747.—Stephen J. Gold.—*Improvement in Warming Houses by Steam.*—Patented October 3, 1854.

This arrangement is designed to render the heat radiated from steam, which may be generated in a boiler by the fire used in the kitchen-range, applicable to warm the apartments of the house, and is to a great extent self-acting after the fire is applied, rendering a special care of it unnecessary. The condensed water is returned to the boiler direct; the pressure of the steam on the water in the return-pipe being counterbalanced by atmospheric air admitted at the orifice R, which is always open. The mode of constructing the surface condenser renders the steam-space tight, allowance being made for expansion and contraction in the corrugations, by riveting the plates in the way claimed.

No. 11,748.—R. L. Hawes.—*Improvement in Machines for Drying Woollen Goods.*—Patented October 3, 1854.

Claim.—The combination of the steam-cylinder A, with the hoops of tenter-hooks B B, when said hooks, after being adjusted to any desired width of cloth on the cylinder, shall move with and have no motion independent of said cylinder, as described.

No. 11,749.—Thomas J. Harris, Jr.—*Improvement in Buttons.*—Patented October 3, 1854.

This invention consists in making the eye of the button in two or more parts, one part being connected by a joint capable of opening inwards, and kept to its place by a spring, as seen at *b a* D, the other part being firmly and unyieldingly attached to the button-plate. The ends of these parts of the eye, which meet, are so formed that the movable parts shall be pressed outwardly against the stationary part, the joint where the two parts meet presenting an entirely smooth surface around the eye.

Claim.—The new manufacture of button herein described, viz: a button having an eye capable of being conveniently opened and closed, in the manner and for the purposes herein set forth.

No. 11,750.—JOHN KIMBEL.—*Dumping-Car.*—Patented October 3, 1854.

The nature of this invention consists in supporting a single body by a bearer *c c*, depending from the same and resting on opposite faces of double inclined planes A A, as described, so that the load may be discharged on either side at pleasure, and the bed returned to a horizontal position without the aid of windlass, chains, or other mechanical devices.

No. 11,751.—JAMES Y. LESLIE.—*Improvement in Knitting-Looms.*—Patented October 3, 1854.

A description of the construction of this machine would occupy too much room in the Report.

Claim.—The combination of the lifting-pins with the teeth provided with grooves for receiving the lifting-pins, that the range of loops may be pushed over the pins, and with hooks to hold the crimped thread, whilst the range of loops are lifted up and discharged over the said hooks; the said lifting-pins and teeth being constructed and operated for the purpose specified.

Also, the bar termed the presser, operated as specified, in combination with the range of teeth and lifting-pins, as specified, and for the purpose of forcing the range of loops over the said lifting-pins after they have been let down into the grooves, as specified.

Also, in combination with the hooked-teeth and the lifting-pins, the discharging bar, for discharging the range of loops from the lifting-pins after they have been lifted up over the hooks.

Also, in combination with the hooked-teeth, the employment of the thread-layers, having a motion downwards and forwards, for the purpose of crimping the thread between the teeth and forcing it under the hooks by one and the same motion.

Also, the employment of movable and adjustable stops, in combination with the thread-carriers, for the purpose of determining the width of fabric to be knitted, and narrowing and widening the same, as specified.

No. 11,752.—JACOB I. LOWNDS.—*Improved Pen and Pencil Case.*—Patented October 3, 1854.

The peculiar construction consists in an arrangement of the pen and pencil tubes and slides, by which the case is made to contain both pen and pencil, and the use of either allowed separately, without interfering with each other, and at the same time allowing the case to be extended or lengthened when in use, and shortened and rendered portable when not in use.

Claim.—The special arrangement of the slotted-tubes *a* B E, and pencil-tubes C, and pen-holder F, as shown in the drawings; the tubes B C having enlarged or expanded ends, and the tube E and pen-holder F having contracted ends, for the purpose of causing the tubes, pen-holder, and pencil-slide to work snugly, and without unnecessary play or looseness.

No. 11,753.—FRANCIS H. SMITH.—*Improvements in Brick-Machines.*—Patented October 3, 1854.

The general character of this machine is sufficiently shown in the drawings, and the special improvements consist—

1st. In the use of a pulverizer, a triangular or other bar of similar shape, *i*, upon the shaft G, and beneath the crusher B in the hopper E.

2d. In the use of a conical plug of wood *b*, which is set into the iron hub raised from the mould-bed M of the pug-mill, and into which the bottom *e* of the shaft J is stepped—said hub and shaft being enclosed as shown, in the stem *c* of the screw D, which is thus permitted to sweep close to the openings in the mould-bed M, while the interposition of the wooden-plug *b* prevents the iron steps of the shaft and the iron hub from grinding upon and wearing away each other, which would inevitably be the case, if, with the sand and water between them, they were allowed to act upon each other; and,

3d. In the construction of the mould-frame with a single removable bottom-plate k^1 between the flanges *m m*.

Claim.—The flat, square, or triangular bar *i*, for pulverizing the clay, substantially as described.

Also, I claim, in contradistinction from a metallic step, a step composed of wood and iron combined, substantially as, and for the purpose, above set forth and described.

Also, I claim the open portable mould-frame with a projecting flange *m*, said mould resting on a single detached plate k^1 for a bottom, and so that when the mould is thrown on the floor, the brick does not at the same time come in contact with the ground, because the flanges interfere, the concussion being just sufficient to give it a start, when it slips easily afterwards from the mould, substantially as described.

No. 11,754.—WM. H. ROBERTSON.—*Improvements in Stone-Cutting Machines.*—Patented October 3, 1854.

The general character of the machine is shown in the drawings. The chisel-carriage P is mounted on a slide O, and has attached to it an endless chain passing over wheels U and V, upon the axis of the latter of which wheels is a forked arm X, embracing a cam Y, from which a short reciprocating motion is communicated to the chisel-carriage P. The cam Y is mounted on the shaft S, a square portion of which (upon which it slides) forming also a motive-shaft of the cam-roller R, which actuates the chisels. In the front of the chisel-frame is a bar *r*, suspended from the rods *t*, against which press springs *v* v^1 to hold them in a horizontal position while the chisels are in operation; said bar *r* is either straight, or of any curvature to which it is desired to adjust the chisels, and is brought down beneath them for that purpose. Between each of the chisels E is a catch-spring *q*, which serves to catch and hold any chisel in action, as occasion may require.

Claim.—I do not claim the invention of a series of cutters or chisels applied respectively to levers operated by a set of cams; but what I do claim in combination therewith, is the turning-stop or adjustment bar

r applied to the chisel-carriage, and made to operate substantially in the manner and for the purposes as specified.

I further claim, in combination with the movable frame, the chisels and the mechanism for imparting to them their up and down movements, a sliding-carriage and mechanism for imparting thereto short and reciprocating endwise or lateral movements, substantially as specified, in order that the chisels may be made to cut the stone without producing ridges between the parts, as specified.

I further claim the combination of the series of catch-springs or bars *q* with the chisel-levers Q and their carriage.

No. 11,755.—WANTON ROUSE.—*Self-acting Mule.*—Patented October 3, 1854.

Claim.—Communicating rotary motion to the spindles, and governing the said motion in breaking off and winding on the yarn during the progressive stages of the building of the cops, through the agency of the double inclined table A, having either a rectilinear or circular motion, with every portion of its face moving in a plane as described, the said table transmitting motion to the shaft which drives the spindle, through any mechanical means whereby the required result may be obtained.

No. 11,756.—ANDREW RANKIN.—*Hat-Bodies.*—Patented October 3, 1854.

Claim.—The combination of the bowing apparatus, as described, with the picking cylinders; also the handle, having layers of silk or other material between the upper and lower perforated material around the edges, as described; also, the employment of the transparent cone for seating up and stopping off hat-bodies, as specified.

No. 11,757.—SILAS S. PUTNAM.—*Improvement in Curtain Fixtures.*—Patented October 3, 1854.

This device consists of the brackets as represented in the figures. The weight of the curtain and the curtain-roller acting on the brackets, tend to force the spur H into the wood or slide of the groove in the window casing, and at the same time to keep the upper end of the arm F of the bracket in contact with the front side of the groove.

Claim.—My improved self-fastening curtain-roller bracket, as made with a spur or its equivalent projected from below the axis of the curtain-roller, in combination with a rest or arm extending above the same, and so that said spur and arm may be applied to the opposite sides of a sash-groove, and be made to hold the curtain-roller in place, substantially as specified.

No. 11,758.—SAMUEL PECK.—*Improvements in the Manufacture of Daguerreotype Cases.*—Patented October 3, 1854.

The boxes are made of a composition of shellac and saw-dust, or fibrous material, with a suitable coloring matter, passed between hot rollers, and when plastic, pressed into moulds.

Claim.—Covering the surfaces of the composition with thin plates of burnished metal or paper, previous to its being pressed in the die. The coating thus made gives the advantage of surfaces to paste the linings to, and also a very neat metallic ornament at a small additional cost.

No. 11,759.—WILLIAM PALMER.—*Improvement in Apparatus for Starting Railroad Cars.*—Patented October 3, 1854.

Claim.—The apparatus for starting cars herein set forth, consisting of the ratchet-wheels C attached to the car-wheels, acted upon by the spring-pawls *i h*, situated within the slotted bars *c d*, which are connected by suitable frame-work with the draw-bar *f;* the whole being so arranged that on starting, the traction of the said draught-bar shall be directly upon the top part of the wheels, until the pawls are thrown out of gear; and on stopping the car the draught-bar shall be pushed back, thereby setting the pawls for starting again, substantially as described.

No. 11,760.—ZACH. M. PAUL.—*Improvement in Brick-Machines.*—Patented October 3, 1854.

The general character of this machine is sufficiently shown in the drawing, and the improvements consist—

1st. In so arranging the two mould-wheels A and A^1 together, that each block *a* (to which an increased convexity is given, so that its rolling pressure will be equivalent to the direct pressure of a plane surface) of one wheel shall coincide with a mould *b* of the other wheel; and,

2d. In ejecting the bricks from the mould *b*, upon the belts D, by the *concussion* (instead of gradual pressure) of an arm *l*, or the frame *k*, upon the stubs *e* of the platens *d*, said frame *k* being raised between each stroke by the notches *m* on the mould-wheels.

Claim.—The above described construction and arrangement of the two mould cylinders A A, which work in close connexion one with the other, to wit: Forming the intervening blocks *a*, between the moulds *b*, of quicker convexity than is due to the circle which would circumscribe them, and so arranging the said blocks and moulds of the two cylinders that they alternately mesh one into the other, whereby the outer face of the brick will be less straight, and the brick be hard pressed in the mould of either cylinder alternately in continuous succession, substantially as specified.

Also, I claim ejecting the brick from the mould *b*, by percussion or sudden jerk applied to the platen *d*, by means of a releasing-frame *k*, arranged and operating substantially as specified.

No 11,761.—SPENCER MOORE.—*Improvement in the Feeding Hoppers of Threshers and Separators of Grain.*—Patented October 3, 1854.

The improvement and claim is confined to the employment or use of flap or swing-blind G, guard-board H, and shoulder *x*, arranged in the manner and for the purposes described.

The manner of arrangement of the parts claimed is clearly shown in the drawing. The purpose alleged is to prevent the dust and grain from passing upward in the face of the operator, the blind G carrying the dust, and board H causing the grain to pass through the machine.

The cylinder, concave, and all other parts of the machine, are disclaimed.

No. 11,762.—JOHN MABIE.—*Improved Pen and Pencil Case.*—Patented October 3, 1854.

The nature of the invention consists in the arrangement for operating the pencil-slide by means of two tubes, having spiral grooves or slots cut in them in reverse directions, the tubes being placed one over the other, the inner tube stationary and the outer tube movable.

Operation.—The pen-slide C is shoved out and in the case by the rims on band D, as usual, and the pencil-slide E is forced out from or drawn within the case, by turning the upper portions G H of the case, which are connected to the tube F. The tube F, as it is turned, forcing the pin *e* along the spiral slot *c*, in the upper part of the stationary tube B, and either up or down according to the direction in which the tube F is turned.

No. 11,763.—WILLIAM C. MCREA.—*Improvement in Railroad Draw-Bridge and Switch Telegraph.*—Patented October 3, 1854.

Without giving a minute description of this invention, which would occupy too much room for this Report, it will be sufficient for an understanding of its general features to give its nature and operation in connexion with the accompanying drawing.

The nature of the invention consists in the arrangement of a galvanic circuit, in such manner that the engineer, conductor, or passengers of a train of railroad cars may, upon the approach of the train to a draw-bridge or switch, be advised of the position of the draw-bridge or switch in time to prevent danger in case the bridge or switch are so placed that the train cannot with safety pass; the method employed being to connect one pole of a galvanic battery, by a wire, with a portion of the railroad track which is insulated, by breaking the continuity of the rails, and supporting the same between the break on some non-conducting substance, while the wire from the other pole connects with the ground, the connexion of the main wire being kept up and broken by the closing and opening of the bridge. The signal is given by the completion of the circuit by the passing of wheels, connected with an electro-magnet on the car, over the insulated portion of the track. The operation is as follows:

During the running of the train the arm *t*, of the shaft *s*, rests on the armature I of the electro-magnet; and supposing the train to be moving towards the bridge, as soon as the wheel *p* rests on the insulated section of the rail *f*, the circuit will be completed, because of the connexion between the insulated rail and the other portion of the track through the wheels *p p*^{1} and the electro-magnet E, and the armature I will be drawn to the magnet. This moving of the armature I to the magnet releases the hammer *q*, which, by the action of the spring F, violently strikes the bell R, and gives the signal that the draw is closed, and the passage therefore safe. Should the draw be open when the train approaches, the connexion of the main wire will be broken, as the plates *c d* and *c*^{1} *d*^{1} will not be in contact. The wheels *p p*^{1} passing over the rail *f*, cannot, therefore, complete a circuit; consequently the movement of the armature I cannot take place and the bell will remain mute, by which all on the train may know that the draw is open.

Claim.—The giving of a signal on a car or locomotive by the arrangement of an electro-magnet upon said car or locomotive, in such manner as to constitute part of a galvanic circuit, when the wheels of the car or locomotive touch an insulated portion of the track while the train is in motion, thereby causing the electro-magnet to be acted upon by a distant battery, for giving said signal, substantially as and for the purposes set forth.

Also, I claim attaching the wires of a galvanic circuit, at railroad draw-bridges or switches, in such a manner that the opening of the draw, or changing of the switch, may separate a part of the wire of said circuit, and closing the draw or replacing the switch, shall again complete the connexion of that part of the wire which was so separated, when used in connexion with the before specified arrangement for signalizing on the car or locomotive, when in motion, the completion of the circuit, substantially as and for the purposes set forth.

No. 11,764.—Benjamin B. Webster.—*Improvement in Mosquito-Curtains.*—Patented October 3, 1854.

In the drawing, A represents a window-frame, provided with two sashes B C. D is the curtain-roller, arranged across the lower girt of the window-frame, and below the lower sash, and supported in bearings seen at E F, in the figure. There is rolled around and attached to this roller a lace, open, or other suitable curtain G, one end of which is affixed to the rollers, while the other end is fastened directly to the lower bar of the lower sash, or, what is better, to a movable bar H, so attached to the sash as to admit its being easily removed therefrom, or affixed thereto, as occasion may require. The curtain-roller is provided with a coiling winding-up spring *a*, applied to one end of a box or case *c*. When the sash of the window is raised, it will elevate and unwind the mosquito-curtain, so as to cover the open space of the window in such manner as not only to allow air to circulate through the same, but to prevent the ingress of mosquitos or other insects.

Claim.—I do not claim the combining a mosquito-curtain with a

window; but what I do claim is, to so combine it therewith, that it may be attached to the sash of the window, and a roller applied to the window-frame, and be operated by said sash, and so as to close the opening produced by the raising of said sash, substantially as above set forth, the said curtain being wound upon the roller by the action of a spring, or its equivalent, when the sash is in the act of being closed.

No. 11,765.—ERVIN B. TRIPP.—*Improved Printing-Press.*—Patented October 3, 1854.

This is an arrangement for feeding sheets of paper to the form to be printed, and removing them therefrom after being printed, and also for a device to ink the form. The paper is placed on the table D^1, and is fed into the press by the vibrating-roller N, and nipper-bar T, and guides U U, which are governed in movement by the reciprocating tympan G^1; after being printed, it is delivered on to the fly-board E. The inking is done by the rollers v^1 v^1, fed from the ink-fountain W, by rollers *v w x*, on which the ink is spread by oblique rollers a^1 a^1, on an endless board Y. Figure 2, in the drawings, is a top view, the tympan being drawn forward.

No. 11,766.—R. A. TILGHMAN.—*Improvement in Processes for Purifying Fatty Bodies.*—Patented October 3, 1854. Patented in England January 9, 1854.

The discovery consists in the fact that fatty or oily bodies of animal or vegetable origin, containing glycerine as their base, if mixed with from a third to a half their bulk of water, and heated, thus mixed, to the melting-point of lead, in a clear vessel, will give as product free fat acids, and a solution of glycerine.

To arrive at a practical result, the fatty body, reduced to a fluid state, may be placed in a vessel *a*, mixed as stated with water, and kept in rapid motion by a perforated disk-piston *b*, to form an emulsion. This emulsion is conducted into an air-tight and strong iron vessel *d d d*, by a force-pump C, and when exposed for about ten minutes to a temperature of melting lead, it is permitted to pass through cooler *h*, from whence, cooled down to about 212° Fah., it is permitted to escape into a water reservoir, furnished with a loaded valve, strong enough to prevent the escape of the mixture from the boiler *d d d* into the cooler *h*, by the mere action of heat, but yielding to the action of heat and of the force-pump C combined, so that it shall be impossible for the air to enter the boiler *d d d* during the operation. The hot mixture of fat acids and solution of glycerine escaping into the water reservoir, separates by subsidence. If the fatty bodies, before being placed in the vessel *a*, be mixed with the proper proportion of carbonated alkali in solution, and heated, as described, up to a temperature of melting tin, the product obtained will be soap—the carbonic acids escaping from the exit-valve, free. Higher temperature accelerates both processes

For a trial of the boiler, as well as for the control of the process.

sundry cavities may be filled with different metals, the fusion of which will guide the operator.

Claim.—Manufacturing of fat acids and glycerine from fatty bodies, by the action of water at a high temperature and pressure.

No. 11,767.—JOSEPH THATCHER.—*Improvement in Gas-Meter Movement.*—Patented October 3, 1854.

The improvement and claim consist in operating the index of gas-meters by means of the lever C, adapted to move or slide against a controlling pin or fulcrum H, or its equivalent—the measuring-wheel and index-movements being connected with the lever by means of the cranks A F, or their equivalents.

The modification of the index-gearing, the extension of sealed tube I, and the foot-index K, are disclaimed.

No. 11,768.—JOSEPH WELSH.—*Improvement in Moving-box Loom.*—Patented October 3, 1854.

Claim.—The application to the lay of those looms requiring or having a moving shuttle-box, of a periodically moving shuttle-stopper A, which receives its motion from any suitable part of the loom, and independently of the picker and shuttle-box, or either of them, and continues so to act as to arrest or stop the motion of the shuttle (without injury to the same or box) on its arrival within the said box, and then immediately turns or moves from the same, so as to allow a perfectly free and independent motion of the box, and also of the picker, during the working operation of the loom, as described.

No. 11,769.—JOHN WILCOX and STEPHEN H. WHITRIDGE.—*Improvement in the Construction of Needles.*—Patented October 3, 1854.

Claim.—A sewing-needle, the stem or body part of which is made of gold, and the point of iridium, the two metals being reduced and united, as described.

No. 11,770.—JOHN E. GRANT, assignor to CYRUS CARPENTER and A. D. SHAW.—*Improvement in Stoves.*—Patented October 3, 1854.

The peculiar devices here used in combination are intended to secure a more thorough combination of the fuel than is done in a simple fire-chamber.

Claim.—The deflecting-plate E, with its saddle-flange *h*, when interposed in the combustion-chamber between the products of combustion and exit-pipes, in the manner and for the purpose herein described.

No. 11,771.—LEVI VAN HOESEN, assignor to NEW HAVEN IRON RAILING COMPANY.—*Improvement in Piano-Forte Stools.*—Patented October 3, 1854.

This stool, in general appearance, resembles those in common use. It is constructed with a double-acting dog or pawl *c*, (as seen in the figure,) so as to act upon the rack E E^1, on the grooved tubular section, by means of projections or swells *b* b^1 on the bar or rod F, which works within for that purpose. A lever G is connected with a spring *g* and the bar F, so that the spring will cause this lever, by means of the bar, to compel the double-acting dog *c* to hold the parts firmly at any elevation that may be desired; while this lever may, by hand, be made to unlock the dog from the rack, and allow the seat to be elevated or depressed at pleasure. A spiral spring is also placed in the lower part of the pedestal, or body of the frame, so as to render the seat an easy one.

Claim.—The combination of the part E E^1 (with its serrated or notched edges) with the double-acting dog *c*, when the dog is operated by the bar F, and the whole constructed, arranged, and combined substantially in the manner as herein described.

No. 11,772.—CHARLES P. BAILEY.—*Improvement in Railroad-Car Seats.*—Patented October 10, 1854.

This invention consists in so hanging the back, seat, and feet-rests of a car-seat, that the back may be reversed, and the seat and feet-rests swing both ways of a vertical line drawn through its centre, so as to make it equally applicable as a seat without regard to which end of the car goes foremost. A represents the supports of the seat, permanently attached to the car. To these supports at 1 1 are pivoted the bars B B. The bars B are connected at their tops, respectively at each end of the seat, by a rail C, which may serve as an arm-support, said rail being connected thereto by pins 2 2 so as to make a free joint. The bars and rails thus connected admit of the free swinging of said bars, but always with a parallel motion, so that the foot-piece not in immediate use is drawn under the seat and out of the way. The seat D is pivoted to the bars B at 3, both front and rear; the fulcra of the bars being at 1, keeps the seat and arm-rests parallel to each other, as one moves forward and the other back, and are always in a horizontal plane, as they should be to make the seat perfect, and prevent the occupant from slipping down.

Claim.—Having thus fully described the nature of my invention, I would state that I do not claim an easy-chair having a self-adapting position to the incumbent, as this has been done before. But what I do claim, is the so bringing together of the back, seat, and feet-rests of a car-seat, that the back may be removed, and the seat and feet-rest swing both ways of a vertical line drawn through their centres, for the purpose of forming a self-adjusting seat, applicable alike to the car, whichever end may go foremost, substantially as set forth.

No. 11,773.—LEANDER W. BOYNTON.—*Improvement in Machinery for Making Hat-Bodies.*—Patented October 10, 1854.

In the drawing, F is a horizontal cylindrical tube of the same diameter as the basis of the hollow perforated cones G, which are placed on the cylinder F, as seen in the drawing. The tube F is sustained on a shaft I, which rests in a bearing *h*, in which it is revolved, in part, to give a vibratory motion to the tube F, to vibrate the cones G and G. On the shaft I is placed a pulley K with a hollow shaft *i*, on which is a pinion *j* which gears into the spur-wheel L, which, by means of the crank-pin or stud *k* and the slotted-bar M, vibrates the cones above the pinion *j*. On the same shaft is a bevel-gear wheel *n*, which works in the two wheels N and N to revolve the cones G and G, so as to present all parts of their surfaces equally to the apertures H and H. On the rear side of the tube F there is an inflexible bar *o*, which, by means of the vibrating slotted-bar *p*, the bar *q*, and the plates *r r*, vary the position of the apertures H H, so that the fur will be blown at all times on the middle of each of the cones, and a part of the time extending alternately to the ends, so as to make the middle part of the hat-body thickest. The plates *r* and *r* are adjustable by means of the holes at *s s*, so that the apertures H and H may be increased or diminished at pleasure.

Claim.—The method of using the cones G, by means of giving them a rotary and a vibrating motion, in such a manner as to bring every part of the outer surface of each cone into such a position, that each part may receive its due proportion of stock to form a hat-body, when constructed and made to operate as described.

Also, the method of varying the direction of the apertures H H, by the vibratory motion of the cones, when constructed to produce the effect in the manner substantially as described.

No. 11,774.—JOHN A. BRADSHAW.—*Shingle Machine.*—Patented October 10, 1854.

Claim.—Shaving shingles by causing them to be fed, by feed-rollers F, between two revolving disks D E, having volute threads cut thereon, and armed with suitable cutters K, one of said disks being self-adjustable to varying thicknesses, substantially as described.

The volute faces, in revolving, carry the piece forward and laterally against a straight fixed guide-bar M, and the planing-irons K smooth it as it passes through.

No. 11,775.—JESSE CARPENTER.—*Improvement in Spinning Rope and Cordage.*—Patented October 10, 1854.

Claim.—The elevation of the spool S above the flyer-shafts *d d*^{1}, so as to occupy the space between the flyer and the ball, whereby the heads of the flyer can be shortened, and a greater velocity obtained for the revolution of the flyer, thus increasing the speed of spinning by Whipple's process; and the regulation of the revolution of the spool

S, by means of the friction-wheel O, whereby the yarn, whose draught and twist are governed by the capstan *n*, is wound up as fast as it is delivered, with less tension and less liability to break.

No. 11,776.—S. D. CARPENTER.—*Rotary Pump.*—Patented October 10, 1854.

Through a fixed semi-spherical shell S^2 passes shaft V, obliquely to the axis of this shell. On this shaft a circular diaphragm D, convex towards water-chamber, fixed at right angles to the shaft, fits closely the shell. A semi-circular vane A, pivoted at *w* in the shaft, works in a slot through the shaft and diaphragm. A flat cap-piece B is secured fast to the face of the shell at p^1 p^1. As the shaft is revolved, the straight edge A^2 of this fan-shaped vane bears against the plane surface of the cap-piece B, fitting closely thereto, thus forming a partial vacuum behind it, in the plano-convexo-zonical water-chamber. The ingress and egress apertures E F are pierced, one below and the other above the portion D, and at that line of the chamber where the straight edge A^2 of the vane or valve becomes a common tangent to the convex diaphragm and the face of the cap-piece.

Claim.—The claims cover this peculiar construction.

No. 11,777.—SAMUEL CARPENTER.—*Improved Machine for Turning Hubs and Tool Handles, &c.*—Patented October 10, 1854.

The peculiarity of this invention is, giving a rotary motion to the stuff to be turned and bored, by having it fed to the cutters through the centre of a pulley driven by a band, and the device for operating the cutters, &c. The stuff D^1 is made square, so as to pass through the square hole in the axis *b* of the pulley D. The screw-rod G gives the feed-motion, and is rotated by the belt c^1. The stationary cutter R roughs off the corners of the work, and the requisite form is given by the cutters O Q and auger S, and the finished work is cut off by the agency of the arm *r* attached to the upright *q*.

No. 11,778.—JOHN D. DALE.—*Cutter-Heads for Planing-Machines.*—Patented October 10, 1854.

Claim.—The combination and arrangement of the screw-hubs E E^1, (with the heads A^1 A,) capable of adjustment by hand, so that knives of any desired length may be inserted and clamped, &c., to suit different widths of mouldings, &c.

No. 11,779.—EDWIN G. DUNHAM.—*Improvement in Stone or Rock Drills.*—Patented October 10, 1854.

The operation of this machine is as follows: motion is communicated to the driving or double crank-shaft *l*, from which it is communicated

to the lifter-shaft K through the small pinion *m* and spur *n*; the spur also causing the small pinion *k* to revolve, and consequently the worm and its wheel.

As the lifter-shaft revolves, each of its arms comes in contact with the friction-plate I, and, in endeavoring to escape by it, inclines it slightly and causes it to bite very rigidly upon the bar G, as the lifter F raises the plate and bar together; and simultaneously with the raising of the bar, the worm *h* and its wheel turns it After the bar is raised its full height, and the lever escapes from under the plate I, the hold of said plate is released, and it assumes nearly a horizontal position, and it and the bar descend together. To raise the bar out of the hole entirely, the spring L must be moved out of contact with the friction-plate I, so as to allow of the plate descending freely by its own gravity, independently of the drill-bar. When the lifter escapes from under it, the second friction-plate J must be moved to the position shown in figure 3, and held at an inclination by the bracket-shaped catch *f*; this plate being properly arranged, the lifter is turned as before, and the first friction plate I will raise the drill-bar gradually out of the hole, the small plate J retaining it elevated until it is drawn entirely up; after this the plate is moved down to position figure 2, and made to serve for raising the bar.

Claim.—So arranging a horizontal plate on the drill-rod, that by bringing the lifter in contact with it in the manner described, it will be caused to incline slightly during the raising of the drill-bar, and consequently to bite or impinge upon said bar, and hold it firmly until it is raised to the position desired, and then, as the lifter escapes, again assume nearly a horizontal position, quit its hold, and fall with the drill, substantially as, and for the purpose, set forth.

Also, rendering the friction plate for raising and dropping the drill-bar, capable of removing said bar entirely out of the holes, which are drilled by employing in connection with it the friction plate J, which is set inclined and made to hold the bar, as it is gradually raised, in the manner substantially as herein described.

Also, the plate J, when set inclined sufficiently to hold the drill while it is being raised out of the holes that are drilled, whether it be used in connection with the friction plate I, or other arrangements in use for raising the drill-bar.

Also, increasing the friction of the plate I upon the drill-bar, and accelerating the descent and blow of the drill-bar by means of a spring, arranged in the manner described.

No. 11,780.—AUGUSTUS ECKERT.—*Improvement in Magnetic Alarm Bells.*—Patented October 10, 1854.

This machine was designed more particularly to be used for telegraphing signals on railways. The bell-hammer is operated by a train of mechanism regulated by a fly in the manner of the common striking train of a clock. The contrivance for unlocking the train by means of the electric current is as follows: Upon the axis of the fly is an endless screw H, engaging a toothed wheel I, which carries upon its axis several radial arms 12.

The train in motion causes the wheel I to revolve until the extremity of one of the arms 12 is arrested by a detent 14, when I becomes immovable, and the further revolution of the screw H causes its axis to move endwise in its bearings, until the revolving disk G, fixed upon it, comes in contact with fixed studs L L, by the friction of which the motion of the train is arrested. The detent 14 has its bearings in fixed brackets 15, and is in one piece with the arm 13, the extremity of which is held down by a detent W, having its bearings in the pillars Y above. On W is fixed a soft iron armature E, which, on the passage of the electric current, is attracted by the electro-magnet T T^1, and causes 13 to be released from W. When this takes place, a spring 19, pressing upon the extremity of the axis of H, forces it back, and with it the wheel I and radial arm 12, causing the detent 14 to tilt until 12 passes over it: and the disk G being then separated from the friction studs, the train resumes its motion until again arrested in the manner above described.

No. 11,781.—THADDEUS FOWLER.—*Improved Sewing-Pin.*—Patented October 10, 1854.

This invention consists in the construction of an emery ball, with a metal rim and back, the rim having a short pin firmly attached to it, and the back also being provided with a pin for the purpose of attaching it to the dress of the person using it, or to the cloth upon a table. A thumb-screw may be attached to this pin for the purpose of fastening it to the edge of the table or work-stand.

Claim.—As a new article of manufacture, the emery ball, with the pin-point fixed in its metallic rim, and provided with the hinged pin and hook, by which it is attached to the dress of the user, or to a table-cloth, for the purpose above set forth and described.

No. 11,782.—LOUIS A. GOSSIN.—*Improvement in the Construction of Sugar-making Apparatus.*—Patented October 10, 1854.

The apparatus consists of a large rectangular range of open evaporating pans, 1 2 3 4, exposed underneath to the naked fire. On each side of the same range, and exposed to the same fire, is a steam cylinder or pipe L filled with water to supply the coils of steam-pipe in the pans, of which the pipes in 1 2 3 4 are illustrations of the different modifications, to aid the fire-flues in heating the syrup. Over the surface of each pan is arranged an endless belt of skimmers B B, which discharge the scum into a hopper-formed basin H K I, whence it passes back into the pans. There is also a discharge-cock R for the finished syrup, having a water-space around it to protect the syrup left on the sides thereof from burning while running off the charge.

Claim.—1st. The arrangement of the boilers L L for generating steam, the pans 1 2 3 4 for evaporating the juice, and the furnace, whereby a single furnace is made to supply the heat for both the generation of steam and the boiling of sugar, through the contact of the naked flame with the bottom of the pan.

2d. The combination of the skimmer, consisting of a series of scoops

B, inclined aprons H and K, and conduit I, operating as described, with the evaporating pan, substantially as specified.

3d. (Disclaiming a water-jacket or its application to any other purpose than the pipes of sugar-pans.) The combination with the discharge-tube R of the sugar-syrup pan 4 of a jacket communicating at either side with, and forming a part of the feed-pipe of the steam-boiler, whereby a stream of water is kept constantly flowing through the jacket, to protect the syrup adhering to the sides of the pipe from being discolored by burning, as described.

No. 11,783.—BENJAMIN F. GOSSIN.—*Improvement in Machines for making Railroad Chairs.*—Patented October 10, 1854.

The peculiar features of this machine are devices for cutting and turning the lips of chairs, so that they will properly fit around the lower flanges of the rails. These improvements will be best understood from the claims themselves, reference being had to the figures illustrative of them.

Claim.—1st. The combination of the semi-circular wheels *m m*, pillow-blocks *h h*, rods 13 and 14, levers 22, and rod 15, for giving motion to the crank-shafts and throwing in and out of gear.

2d. The combination of the two crank-shafts B B, the cutters 10 10 attached to the said cranks, the frames 9 9, and the cutters 11 11 attached to the said frame, for cutting the lips from the blanks and turning the same around the mandrel.

3d. The tapering of the two sets of cutters 10 and 11, so that the cutters will fall freely from the chain after being completed.

4th. The adjustable sliding-piece *s*, to which the cutters 11 11 are attached by means of bolts, &c., the piece *s* being held in its place by the key *k*, and made so as to adjust the cutter to different thicknesses of iron.

5th. The table *f f* on which the blank-chain is laid, between the two sets of cutters 10 and 11, the upper surface of said table extending up flush with the upper surface of the shaft-cutters, and attached to the frame of the machine.

No. 11,784.—JOHN W. GRIFFITH.—*Improvement in the Construction of Ships.*—Patented October 10, 1854.

As indicated by the *claims*, the improvement consists in the method of increasing the strength of ships by vertical plates of iron *b b* extending up vertically from the keelson *a* to one or more decks, and secured to the keelson and deck, and extending the whole length of the ship; and in giving additional strength to ships by means of longitudinal bulk-heads *h h* of plate-iron interposed between the centre keelson and the sides of the ship, and extending from the side timbers to the deck, and secured to them, whether made water-tight or lattice-work.

No. 11,785.—Robert Grant.—*Improvement in Brakes for Checking and Starting Cars.*—Patented October 10, 1854.

This invention consists in the application of a torsional spring-clutch acting upon the wheels of railroad cars, and resisting their advance when desired, in such a manner that the compression of said spring may be employed as a starting force whenever the cars are to be put in motion again.

Claim.—The application and employment of a spring, spiral or other convenient form, in combination with the axle or wheel, or other running-gear of railroad cars or other vehicles, constructed and operating substantially as hereinbefore described, and for the purpose of stopping and starting, or either, a car or vehicle, as hereinbefore mentioned.

Also, the apparatus for winding up or compressing said spring, and causing it to act upon the axle or wheels by means of the fast and re volving clutches with their connections and escapements, substantially as described.

Also, the employment and application of sectional tubes or washers on the axle or shaft, when used in the said combination, for the purpose of preventing the spring from binding, and to enable the same to be easily and fully compressed.

No. 11,786.—Eben N. Horsford.—*Improvement in Compounds for Neutralizing Chlorine.*—Patented October 30, 1854.

The discovery consists in a preparation of sulphurous acid, cheap, transportable, odorless, hardly soluble in water, and in the presence of bleaching-salt strongly reacting. To obtain the preparation, milk of lime is saturated with sulphurous acid, employing a surface of three and a half feet by two feet of burning sulphur for a ton of lime. The water is then drained off and the remainder dried and stored away for use. The preparation when used has to be stirred up with water in small quantities, until the presence of chlorine is no more perceptible by the usual tests.

Claim.—The process of neutralizing chlorine by means of the substance herein described and called anti-chloride of lime.

No illustration.

No. 11,787.—Simon Ingersoll.—*Improvement in Pawl Drills.*—Patented October 10, 1854.

Claim.—The centre-piece E constructed with two gudgeons or pivots, or their equivalents, for the wheel G G to turn upon, and to form or support the fulcra of the lever J by which the drill is operated.

No. 11,788.—John Jack.—*Improvements in Saw-Gummers.*—Patented October 10, 1854.

Claim.—The arrangements of the parts of the machine, as hereinbefore set forth, in combination with a short die-lever D, bearing a fric-

tion-roller E, and another hand-lever G to manœuvre an eccentric F, working on said friction-roller, as a means for working a hand-machine for gumming saws.

No. 11,789.—LYMAN JENNINGS.—*Improvement in Cans for holding Liquids.*—Patented October 10, 1854.

Claim.—I do not claim the adaptation of a handle to this or any other form of vessel, neither do I claim making a keg for containing any liquids of wood, as this has been done before; but what I do claim as my invention, and desire to secure by letters patent as a new article for containing milk and other liquids, is the above described wooden can, having its upper head convex, and being furnished with a handle, in the manner and for the purpose set forth.

No. 11,790.—STEPHEN C. MENDENHALL.—*Improvement in Looms.*—Patented October 10, 1854.

Claim.—Opening the shed by a pattern-wheel D, so arranged with its parts as that while its rotary motion commences the opening of the shed, it shall have a vertically yielding motion to and with the treadles, when combined with a wedge-shaped bar J, on the lay, arranged to separate the treadles, and thus complete the opening of the shed, both the pattern-wheel D and the wedge-shaped bar J being moved by the lay, substantially as described.

No. 11,791.—ELIJAH MORGAN.—*Improvement in Cutting Shingles.*—Patented October 10, 1854.

Claim.—1st. The mechanism which feeds the head-block G with the bolt K to the saw, so that, at each passage of the carriage C C by the saw H^1, a shingle will be cut with its proper taper. This is effected by giving the head-block G a zig-zag movement as it advances each time to the saw, for another shingle. A zig-zag slot I, in the under side of the head-block, causes this movement by means of a fixed pin *a*; the set-screw J allows the head-block to vibrate to its different positions. Figure 1 shows it in one of such positions. The pawl N moves the head-block on the backward movement of the carriage C C into such oblique position, by striking against the fixed-stop O. Being thus obliqed, the carriage C C (by ordinary means) advances, and the tapered piece is cut and falls.

2d. A toggle-jointed dog P P on the head-block is made to clamp or unclamp the bolt K, by a pinioned lever *m*, (fig. 3,) gearing into a rack *l*; the pawl O holds it to its clamped position. The claims cover these two mechanisms.

No. 11,792.—RICHARD OLIVER.—*Improvement in Buttons.*—Patented October 10, 1854.

In the figure, A represents the eye hinged to the back B of the button, as seen at *c*. The eye is made nearly as long as the button, the

middle portion being reduced in thickness, so as to be elastic; *f* is the hole, around which is a cavity or counter-sink *b*, to facilitate the insertion of the hook *a* in the hole *f*.

Claim.—In buttons or fastenings for clothes, having one end of their eyes hinged or rigidly fasted to the button, making the eye elastic, in combination with the cavity or counter-sink, to facilitate the inserting of the other end of the eye into the hole, or its equivalent, into which it is hooked in closing the eye to fasten the button, substantially as described.

No. 11,793.—EMERSON PRESCOTT.—*Improvement in Horn and Shell Splitting Machines.*—Patented October 10, 1854.

In the figure, A denotes the metallic bed or base, having a press frame B applied over it; this frame is made to carry a press platen C, and a powerful screw D, for forcing the platen downwards towards a movable carriage E placed between the platen and bed, and caused to move longitudinally under the platen, for the purpose of carrying the horn or shell to be split. F is the splitting-knife, placed as represented in the figure.

Claim.—In combination with the movable carriage and the splitting-knife, and arranged with respect to them, as specified, is a single platen press, of power sufficient, when the shell or horn is softened or rendered expansive by heat, to reduce it to a uniform thickness on the carriage, and to preserve it in such state, preparatory to, and while it may be moved against the splitting-knife, as stated.

No. 11,794.—JOHN P. SHERWOOD.—*Improved Damper for Ovens.*—Patented October 10, 1854.

This peculiar damper R, used for a flue surrounding an elevated oven, gives control over the admission of the heat to one side or the other, or to both at the same time, as may be found expedient.

Claim.—The arrangement, herein described, of the revolving damper, whereby the heat of the oven can be tempered and regulated, as herein specified.

No. 11,795.—CORNELIUS SPEER.—*Improvements in Ginning and Cleaning Cotton.*—Patented October 10, 1854.

Claim.—The combination of the endless belt E with the roller-beater G, the said roller-beater being placed so as to work directly upon the flat or closed portion of such belt or chain, while its closed teeth hold the fibre; thus performing the whole separating process without the intervention of any other machinery than that of feeding and cleaning the machine, as described.

No. 11,796.—HENRY TONGUE.—*Improvement in Rotary Steam-Engines.* Patented October 17, 1854.

The improvement consists in constructing the piston B of a semi-rotary engine with sliding metallic packings *e e*, in combination with the stop C and cylinder A, substantially as set forth.

No. 11,797.—HENRY VOLKENING.—*Polishing Machine.*—Patented October 10, 1854.

Claim.—Placing between the revolving cylinder and the sand-paper, or its equivalent, an elastic substance, for certain advantages, as set forth.

No. 11,698.—ALBIN WARTH.—*Improvement in Turning-Lathes.*—Patented October 10, 1854.

The nature of this invention consists in having a slide-rest, with a number of suitable tools attached, which are made to operate on the material to be turned by means of levers, which follow the configuration of fixed metallic guides.

Claim.—The special claim is for the guide-levers $p\,p^1$, in combination with the opening-slides $j\,j^1$, and the guide-plates *r*.

No. 11,799.—IRVIN A. WILLIAMS.—*Improvement in Locomotive Lamps.* Patented October 10, 1854.

Claim.—Constructing the can B with partition, for preventing the swash of the fluid, and insuring a steady feed to the burner.

Also, the combination of the perforated, inverted cone *b*, cap *f*, funnel *d*, and perforated tube *c*, constructed, arranged, and operating, for admitting air to the can, and preventing the slopping of oil from the vent.

Figure 5 represents a part of the apparatus on a larger scale.

No. 11,800.—THOMAS B. WOODWARD.—*Improvements in Smut Machines.* Patented October 10, 1854.

The improvement and claim are confined to covering the apertures by which the air is discharged from the fan-case K into the side-pipes I with gauze *g*, to temper and diffuse the blast, and to prevent the grain from getting into the fan-case and being broken by the fans, and thus retarding the machine by the friction they would produce.

No. 11,801.—EDWARD J. WOOLSEY.—*Improvement in the Construction of Sugar Boilers.*—Patented October 10, 1854.

Claim.—Apparatus consisting of a centrifugal distributor E. placed within a heated pan A, or otherwise arranged relatively to heated sur-

faces, which are equivalent to the heated interior surface of the pan, or of the coils C contained therein, so as to throw the juice, syrup, or solution to be evaporated, in a shower, or minutely subdivided state, on the said heated surfaces, and allow it to trickle down the sides of the pan, or of the said heated surfaces, in a thinly diffused state, substantially as set forth, for the purpose of evaporating its moisture.

No. 11,802.—SAMUEL B. HOWD, assignor to THOMAS F. DAVIS, JAMES S. LEACH, and RICHARD F. STEVENS.—*Improvement in Processes for the Manufacture of Salt.*—Patented October 10, 1854.

The improvement is based upon the discovery that water may be heated under pressure of steam to a sufficient extent, and the evaporation carried so far before the crystallizing of the salt, as to cause the separation or crystallization and deposite of the muriates of lime and magnesia while the salt remains in solution. The drawing exemplifies the application of the discovery. The crude brine is forced through K into the steam-chamber B of the boiler A, in order that it may become highly heated by the steam, causing rapid evaporation; and by being mixed with a portion of strong brine, which is thrown into the steam-chamber B from the boiler A below, its strength is raised sufficiently to cause the crystallizing of its impurities while the salt remains in solution—that is, before the brine has reached the point of saturation. The latter then passes through D E F, into the settling chamber placed in the lower part of the boiler A, where it is sufficiently free from the currents caused by the fire in R, to allow the impurities to deposite. The boiler A is thus supplied with pure brine, and a large portion thereof may be drawn off at J into the salting-vat L, before crystallization commences. By the rapid working of a forcing-pump, set in motion by an engine S, actuated through G, by the waste steam of chamber B, the boiler is again filled, the engine kept constantly in motion, and the escape-steam in H J completes the evaporation in the salting-vat L, which latter may be facilitated by connecting a revolving paddle M with engine S.

Claim.—1st. Mixing weak with strong brine in the steam-chamber of the boiler for the purpose described, and passing the brine thus mixed into a settling apartment connected with the lower part of the boiler, and thereby causing the separation and deposite of impurities from the brine, before it comes in contact with the fire-surface of the boiler, substantially as set forth.

2d. The method described of purifying brine, viz: by evaporating it in closed boilers to the extent stated, in combination with vats, for crystallizing the salt from the brine thus purified.

No. 11,803.—E. B. BIGELOW.—*Loom for Weaving Cut-Pile Fabrics.* Patented October 17, 1854. Patented in England December 31, 1851.

A description of the nature and operation of this invention would occupy too much space in the Report.

Claim.—The method of adapting the cutting-knife r^1 to the proper position relative to the wire to be cut out, under the varying conditions of the loom, by making the frame or carriage p, which supports the cutter-knife r^1, movable.

Also, in connexion with said movable frame or carriage p, which supports or carries the cutting-knife r^1, a guide or guides a^1, to rest against the wire to be cut out, to preserve said frame or carriage and cutting-knife in a proper position relative to said wire.

Also, connecting the cutting-knife with the reciprocating bar e^1, by means of a double-acting or compound joint (shown in fig. 6.)

Also, in combination with the reciprocating bar e^1, or its equivalent, with which the cutting-knife r^1 is connected, the employment of a guide g^2, which shall move in unison with said cutting-knife, to insure its proper position relative to the wire to be cut out.

Also, the method of preventing the wires from being drawn down on their sides by means of hooks or bars m^2, as specified. In the drawings, the wires are represented by broken lines. Fig. 1 is part of a vertical section, and fig. 2 part of a plan of the machine; figures 3, 4, 5, and 6, are on enlarged scales.

No. 11,804.—Joseph T. Barnes.—*Improvements in Power Looms.*—Patented October 17, 1854.

Claim.—Fitting the journal-boxes B, of the crank-shaft C, to slide on ways *a a* on the framing, upon which, when liberated, by reason of some obstruction in front of the reed, they are capable of being drawn back, to carry back the crank-shaft from its operative position, and prevent the further advance of the lay by springs *d*, or their equivalents.

Also, setting free the journal-boxes of the crank-shaft from the hooks or their equivalents, which hold them in proper operative position, by means of a rock-shaft E, or roller, hung in bearings in rear of the breast-beam, or otherwise conveniently placed near the front of the loom; said shaft having attached to it a bar F, which is conveniently placed for the breast-beam to pass under it, and for the shuttle, when the latter is arrested in front of the reed, to be driven against it and drive it forward, and thereby throw up two arms *g g*, which are attached to the shaft, and cause these latter arms to set free the journal-boxes of the crank-shaft, and allow them to retreat and carry back the shaft.

Also, furnishing the crank-shaft C with cams *i i*, which, when the loom is started, with the shaft thrown back, work in contact with projections *m m* on the loom-framing, and throw the shaft and its journal-boxes forward to their operative position.

No. 11,805.—Daniel Barnum.—*Improvement in Machine for Forming Hat-Bodies.*—Patented October 17, 1854.

Claim.—In combination with the picker or brush *l* and perforated cone or former *o*, the employment of currents of air at the bottom and

sides as described, to guide and direct the deposite of fur on the cone or former.

Also, the employment of a form d^1, made of grass-cloth, or other flexible material, pervious to air, on which to deposite the fibres in forming the bat, and to be taken from the perforated metallic cone or former with the bat, and retained inside as an "inlayer" during the after-process of hardening.

Also, the employment of an India-rubber cap e^1, to be put on the bat of fur, to hold the fibres together in taking off the bat from the perforated cone or former, and to facilitate the hardening of the bat in the dry state, as specified.

No. 11,806.—JOSEPH D. ELLIOT.—*Improved Water Meter.*—Patented October 17, 1854.

The nature of this invention consists in combining with a two-way cock a measuring apparatus and register, so that, by simply turning the cock, a measured quantity will be let out, and at the same time a measured quantity let into the apparatus; which, in turn, may be let off by turning the cock in an opposite direction, and each measured quantity thus drawn indicated correctly.

Fig 1, in the drawings, is a front elevation of this meter; fig. 2, a vertical transverse section through the machine, with the plug or cock C.

Claim.—The combination of the measuring chamber F F^1 with the cock L. Also, in combination with the cock C and reservoirs F F^1, the air-passage K, with its float, or equivalent valves L, for the purpose of forming a governor, to receive and discharge the water; all substantially in the manner and for the purpose specified.

No. 11,807.—E. A. HILL.—*Smoke-Consuming Stove.*—Patented October 17, 1854.

To obviate the loss of fuel which passes off in the form of smoke, the devices here arranged together are such as to direct the combustible vapors and gases from the chimney-flue, causing them to pass under one of the two sets of grate-bars of this double stove; as the combustible matters pass up through them into the clearly burning fire above, they are consumed. A draught-flue is connected with the stove, to insure a sufficient supply of air to the fire, and fresh air to be warmed to enter the apartments.

Claim.—1st. The combination and arrangement of the smoke-passage C, dampers F F^1, and draught-flues G f G^1 e, substantially as herein described, for the purpose of conducting the unconsumed smoke or carbonic oxide through completely ignited coals, in a simpler and readier manner than has been done before, as set forth.

2d. I do not claim the pipe H I for the purpose of ventilating a room; but what I do claim is, the combination of the draught-flues G f G^1 e, and i i, in combination with the pipe H I, for the purpose of supplying the stove with the necessary quantity of air, to insure the complete combustion of the fuel, or for preventing the smoke from smothering the fire, substantially as set forth.

No. 11,808.—D. W. Horton.—*Improvement in Shoemakers' Edge-Planes.* Patented October 17, 1854.

The head F of this plane has an inclined recess for the reception of the blade *a*, and a slot *h*, which forms the throat for the escape of the shavings. The blade is capable of adjustment for regulating the thickness of shaving by the screws *e e*; *b* is a regulating-guard, which can be moved to the right or left upon the head, to regulate the width of surface to be planed; and *c* is the set-screw, by which the guard is held in position.

Claim.—The combination of the guard *b* with the head F and the blade *a*, in such a manner as to form a sole and heel edge-plane that is adapted to the use of the right or left hand, substantially as set forth.

No. 11,809.—Bernard J. La Mothe.—*Iron Buildings.*—Patented October 17, 1854.

Claim.—1st. The construction of the frame or skeleton of the buildings with bands or plates of iron or steel, or other metal, riveted or screwed together in sets of several parallel bands, the same extending from the foundation to the top of the structure, in lieu of columns, pillars, or walls.

2d. Making the beams for floors, and rafters for the roof, by bending a certain number of the parallel bands which have been used in the perpendicular walls below, to the required position to serve as beams and rafters, the same being strongly riveted or screwed together.

3d. The vertical continuous beam, figure 2, constructed of several parallel plates strongly riveted together; also, the combination of the horizontal and vertical beam of parallel plates I, as shown in figure 1.

No. 11,810.—John H. Manny.—*Improvement in Grain and Grass Harvesters.*—Patented October 17, 1854.

Claim.—1st. The arrangement of the platform L obliquely to the cutter-bar, so that the gavels of the cut grain will be discharged at a sufficient distance from the standing grain to leave a clear pathway between the two for the team to travel in.

2d. Combination of the platform of a wing M, to facilitate the gathering of the grain, by affording to the operator a point of resistance, against which he may throw it with a rake from the stand P.

3d. Forming the caps of the guard-fingers D with a pair of knives I projecting from their rear end over the cutters C C; and,

4th. Making the outside dividing fingers F hollow, so that while it affords sufficient room for the play of the end of the sickle, the bearing of the latter thereon will not be so wide as to afford a lodgment of grain, &c.

No. 11,811.—CHARLES ROSS.—*Grinding-Surface in Mills.*—Patented October 17, 1854.

Into a cast-iron concave of conical shape, with flanges at top and bottom, pieces of burr or other stone, cut into a radial or wedge shape, are inserted through an emargination in the flange left for that purpose. The last piece, being firmly drawn into its place, acts like a wedge to keep up the whole of the lining, which acts as a grinding-surface. The nut is of solid stone.

Claim.—Forming a grinding-surface in mills by lining a cast-iron concave with radial segments of burr or other stone, said segments being fitted or secured to their places in the manner herein set forth.

No. 11,812.—MOSES SARGENT, Jr.—*Improvement in Roving Tubes.*—Patented October 17, 1854.

Claim.—Combining with the common trumpet-mouthed roving tube A, one or more hooks C, so as at all times to secure the condensing of the roving while unbroken, and permit a broken roving to be pierced without stopping the machine, or even a single tube, in the manner described.

No. 11,813.—JOHN J. SQUIRE.—*Improved Sawing Machine.*—Patented October 17, 1854.

The nature of this improvement consists in the employment of a radius-guide E, applied to the saw, for the purpose of controlling and guiding it as it enters the stuff to be sawed; and also to insure a true movement of the saw, and prevent it from vibrating; likewise in the employment or use of feed-rollers F F, G G, placed within a sliding-frame H, for the purpose of gauging the stuff to be sawed, properly presenting it to the saw, and guiding it while being sawed.

Claim.—The arrangement and use of the devices, in the manner and for the purpose specified.

No. 11,814.—RICHARD B. STEVENSON.—*Improvement in the Mode of Constructing Pipe.*—Patented October 17, 1854.

Claim.—The combination of pipe, of sheet-zinc or other suitably cheap and durable sheet metal, and an exterior coating of hydraulic cement mortar of requisite thickness for strength, durability, and impermeability, for conveying water or other fluids beyond the action of frost, from one point to another.

No. 11,815.—CONRAD F. THOMIN and CHARLES STUMER.—*Improvement in Process for Enamelling Iron.*—Patented October 17, 1854.

The improvement consists in dusting on the powdered frit upon a wet surface, instead of putting the frit on in the form of a paste previously mixed up with water or other liquid.

Claim.—The claim is restricted to treating the cleansed surface of the steel or wrought metal to be enamelled, with a mucilage or viscid solution, and powdering or otherwise evenly distributing the pulverized frit thereon. No illustration.

No. 11,816.—HENRY WAYNE.—*Improvement in Joints for Toilet-Glasses.* Patented October 17, 1854.

This toilet-glass is provided with a joint, which renders the glass presentable in any direction, both lateral and vertical, so as to bring different parts of the person successively within the scope of vision, and to adapt it readily and steadily to the requirements of persons of different heights. A bracket *b c d*, sustaining the glass, extends at its lower edge in the form of a segmental wing *d*, having shallow and somewhat tapered notches *i*, as represented in the figure; it is supported on a pivot *e*, in a cup *f*, said cup being slotted, 2, to permit the play of the bracket. A pawl *g* fits within the notches, and is held to the desired pressure within the notches of a spiral-spring *h*, which bears at one end against a shoulder on the pawl, and at the other end against a shoulder 4, in a cylindrical shank *i* of the cup. This shank fits and rotates within a socket *j*, let into and secured to the top of the toilet-table or bureau. The pressure of the pawl is so adjusted by means of the spring, as that the glass shall be held securely to any position in which it is placed, and prevented from shifting by the action of any force short of an intentional one against the mirror.

Claim.—The vibrating bracket, having a segmental wing, with tapered indentations and spring-pawl, or their equivalents, in combination with the horizontal rotating pivot as described, forming a shifting joint for a toilet-glass.

No. 11,817.—E. D. WILLIAMS and T. TYRRELL.—*Improvements in Brick-Presses.*—Patented October 17, 1854.

This machine consists of a wheel A, receiving, through any known device, an intermittent motion, and having six moulds, 1 2 3 4 5 6, two of which are at each pause beneath the fixed heads V and V^1, to receive the pressure given to the brick, by the pressure which platens N receive from the plungers I and I^1, said plungers being actuated by the advance of a rack-bar between two racked sectors, as shown in the drawing. In position b^1, the mould receives the clay from the hopper; at b^2 it receives the first pressure; at b^4 its final pressure; at b^5 the brick is expelled by the upward thrust of plunger J^2, actuated as plungers J and J^1. At b^6 the mould is idle; while at b^3, between the first and second pressures, the brick is perforated by a number of pins *g g*, in a block *o*, working in a box G, to release the confined air. The stud *i*, working in a slot *j*, in a plate attached to bar E, operates the rod Q and lever P, which depresses the pins *g g*.

When the wheel A is brought to stand, that the brick may receive pressure, it is thrust up so that the faces of the moulds are in close contact with the surface of the fixed heads V, V^1; but during the intermedi-

ate motion, the wheel is let down to prevent the otherwise unavoidable friction. This is effected by placing around the shaft B, and above the tight collar *f*, a loose collar *l*, upon which the hub of the mould-wheel A rests, and both of which collars have prominences *m* and depressions *n*. These are alternately allowed to fit into each other, (thus lowering the wheel,) and caused to oppose each other, (thus raising the wheel,) by the action of the two spring-dogs *o* o^1 (attached to standard R upon bar E) upon the projections *p* p^1, the one taking effect during the advance, and the other during the retreat of the bar E.

Claim.—The employment, placed between the mechanism which produces the first and that which produces the final pressure, of a perforating apparatus, consisting of a number of pins *g g*, which are perforated through the bottom of a box or its equivalent G, and which is otherwise arranged and operated substantially as herein described, to perforate or prick the partly pressed clay, to allow of the escape of air which may be contained therein before final pressure, as herein set forth.

We do not claim giving to the revolving mould-wheel a movement in the direction of the line of its axis, for the purpose herein set forth; but we claim, 2d. The particular method herein described of giving the said movement by means of the loose collar *l*, fitting to the shaft and having prominences and depressions corresponding to similar depressions and prominences on a fixed collar *f*, and having projections *p* p^1 on its sides, to come in contact with spring-dogs *o* o^1, attached to the framing E, the whole combined, arranged, and operating, as herein set forth.

No. 11,818.—JOHN YANDELL and JOSEPH H. JOHNSON.—*Iron Tress Bridge.*—Patented October 17, 1854.

This improvement does not consist in simply combining the tress-frame with the suspension cords, for that is old and well known; but it is limited to the peculiar manner of connecting together the several parts of the tress, and that with the suspension cables. None of the parts are of themselves claimed as new.

Claim.—The peculiar mode of connecting together all the several parts, as they are employed in the tension-tress-work; and also, the mode of combining the same with suspension-cables, in the manner and for the purposes set forth.

No. 11,819.—JAMES H. STIMPSON, executor of JAMES STIMPSON, deceased.—*Improvement in Vessels for Holding Liquids.*—Patented October 17, 1854. Antedated April 17, 1854.

Claim.—I do not claim the double wall as a means of intercepting heat; nor do I intend to claim such a device, as applied to any structure or vessel whatever, for the purpose of economizing in ice, unless attended with all the advantages and results of my double-wall ice-pitcher. It is obvious that refrigerators, urns, tumblers, double-plates, and such-like articles, occupy special positions in household economy,

and distinct from my double pitcher, and that no one of them can be made to subserve all its purposes and ends; and I therefore disclaim them, one and all, and confine my claim to the double-wall pitcher.

It is obvious that the lid, from its small surface and position in reference to the circulation of heat, may be made single with comparatively small loss, but I prefer to make it double, as set forth.

What I claim, therefore, as my invention, is the double-wall pitcher, the same consisting in a pitcher with double sides, double bottom, and a hinged cover, from which the liquid contents are to be poured through or over a nose or lip, substantially as herein set forth. I am aware that a lever has been used upon the covers of molasses-pitchers, for raising the cover, and this I do not claim; but I do claim the employment of a chain or string attached to the handle and lid of the pitcher, as described.

No. 11,820.—JOHN RICHARDSON.—*Improved Pen and Pencil Case.*—Patented October 17, 1854.

The invention consists in the employment of a single operating sleeve D on the case, capable of sliding and turning, so as to operate the pen and pencil holder alternately, or either, at pleasure; and in the method of locking and unlocking the pen and pencil holders, so that one shall be held in a retracted position, while the other is free to slide out and in; this is accomplished by transverse slots *o i* in the upper part of the inner case. In the drawing, the two cross-sections are on an enlarged scale.

No. 11,821.—HENRY F. BAKER.—*Improvement in Ploughs.*—Patented October 24, 1854.

In this plough, mould-board B, share C, and curved-arm D, are cast in one piece, which turns upon pivot *a*, in point A. The arm D has a slot *d*, which slides upon *b* of arm *c*, which is cast with the land-side. Rod E is capable of partial rotation, and carries arm F, which has a slot *e* sliding upon pin d^1 of the mould-board. By means of a lever the ploughman turns rod E, and with it the mould-board through arm F, in order to give a desired width to the plough. The slotted arms F and D only are claimed, in combination, as an improved means of adjusting the mould-board.

No. 11,822.—MARK S. BASSETT.—*Improvement in Sifting and Bolting.* Patented October 24, 1854.

This is an economical arrangement of a revolving sieve of coarse meshes, in connection with a fixed one of finer texture, which may be attached directly to a mill, and used as a flour-bolt.

Claim.—The riddle, as arranged and described, in connection with a shaft and bearings, centralizing said riddle so as to rotate against an ordinary flat sieve-disk at its margin, as a feedor, distributor, and vibrator combined, for the uses and purposes herein set forth.

No. 11,823.—JOHN D. BEDWELL.—*Improvement in Smut Machines.*—Patented October 24, 1854.

The improvement is clearly set forth in the claim, which, the trunk C being disclaimed, embraces but the rotating inner and stationary outer cylinders I and J, both constructed of overlapping metal-bars *b b b*, (giving a corrugated surface to the cylinders, and at the same time admitting a current of air through them,) when combined and arranged with an outer close cylinder G, and operating in connection with a fan-blast, or suction, made to communicate with the interior of the rotating bar cylinder I, as well as with the enclosed space surrounding the outer stationary bar cylinder J, and with the trunk C, as shown in the drawings, for the purposes set forth. These are to expel the smut more rapidly, and more thoroughly separate it from the grain whilst it is scoured through the spaces of the two bar-cylinders, and thereby avoid discoloration of the wheat by loose smut adhering to the blossom-ends of it.

No. 11,824.—ARCHIBALD BOWEN.—*Improvement in Straw and Grain Separators.*—Patented October 24, 1854.

The invention consists: 1st. In constructing the straw carrier and separator of an ordinary threshing machine of two superposed beds, B. and E, both of them jointed in two or more points, and both set in a vibrating motion by a common gearing, as represented in the drawing; one of them, viz: the upper one, being perforated for the transmission of the grain to the lower one, and the lower one being inclined towards the head of the machine, to carry the grain falling over it to the blast and riddles.

2d. In creating an artificial eddy on the screen *m*, in order to prevent the sound grain from being carried by too strong a blast over said screen.

Claim.—1st. The method of separating the grain and chaff from the straw, by the combination of the inclined vibrating bed E with the perforated jointed bed B, arranged and operated substantially as set forth.

2d. The extending of the upper-screen *m*, by the double inclined plane *r p*, in combination with a blast compressed by a covering I above the screen, for the purpose that an eddy may be formed by the blast, and the grain, if carried too fast by the latter, be returned, upon the inclined plane *p*, to screen *m*, substantially as herein set forth.

No. 11,825.—ROBERT BOYACK.—*Machine for Softening Hemp, Flax, &c.*—Patented October 24, 1854.

Claim.—Softening flax, hemp, &c., by means of a reciprocating plate E, having a slot *h* through it, and working between two pairs of fluted rollers B B, B^1 B^1; the flax or hemp passing between the two pairs of rollers, and through the slot in the plate, and operated upon by the plate and rollers.

No. 11,826.—Samuel W. Brown.—*Improvement in Machinery for Cleaning Cotton.*—Patented October 24, 1854.

Claim.—Making racks or grids E, to be used in cotton and other pickers, of a number of bars of iron or other substance, each of these bars being bevelled to an edge, and these edges being so arranged in the rack that the cotton will first come in contact with the edges of the bars, as it is thrown forward over them by the beater B; the bars of these racks being tied or held together once in about three inches, more or less, by cross-ties, they being cast with the bars of the rack, or otherwise connected to the bars, for the purpose of staying them, and always presenting parallel slats of equal width for the dirt to pass through.

No. 11,827.—Patrick S. Devlan.—*Improvement in Chairs for Round Rails.*—Patented October 24, 1854.

Claim.—I am aware that tubular rails, of various forms, have been devised for railroads, and that the outside jaw of an ordinary chair has been so elevated as to take the tread of the wheels in passing over the joint; these I do not claim.

But what I do claim herein, as new, is the method of confining cylindrical rails at their joints, by a chair which forms the rail between the joints, and so made as to keep and support the rails in proper line, whilst they may, at the same time, be turned in their bearings in said chairs, as well as the intermediate ones, substantially as described.

No. 11,828.—George L. Dulaney.—*Improved Mill Bush.*—Patented October 24, 1854.

The constant friction and abrasion of the bush and spindle is remedied, by the two hollow cones which surround the spindle being made to slide like wedges over each other, having all their surfaces kept in contact by the operation of the springs F F upon the nut *g*, drawing B and D together by means of the bolt E, all of which is done without the interference of the miller.

Claim.—Use of the springs F F, actuating the nut *g* on the draw-bolts E E, for the purposes set forth in the specification.

No. 11,829.—Absalom B. Earle.—*Improvement in Seed Planters.*—Patented October 24, 1854.

In this machine, E is the hopper from which the seed passes into hole *e*, and is then received by opening *n* of the reciprocating feed-slide, and carried beyond plate *m*, where it drops through drill-tube L. Spring J presses a guard-plate *u* into hole *e*, where the plate *n* meets the forward stroke of the feed-slide, and cuts off the flow of seed without breaking the kernels. The feed-slide consists of two parts, so adjustable upon each other as to increase or diminish opening *n* at pleasure, and is moved one way by a spring, and in the opposite direction

by bell-crank H, which is struck at intervals by pins *s* in the hub of wheel A.

The drag-bar K is hinged in front, and, transfixing the drill-tube L, is held in the rear by a chain; two notches *t t* fit the side of the drill-tube, and are kept in place by wedge *v*. For sowing broadcast, the drill-tubes can be removed, and the seed allowed to fall upon a directing-board which swings under the axle.

Claim.—I am aware that drill-tubes have been constructed to drag-bars by means of lugs, brackets, braces, and screw-bolts, and that drill-tubes have been inserted into a beam attached to and parallel with the axle of the machine; but as it is the object of my invention to dispense with and supersede these devices, I do not claim them, either separately or in connection. I am also aware that a spring-guard-plate has been adapted to a series of rotating discharging-cups—but not in such manner as to detain any excess of seed which the cup might contain, and drop it into the next; to such a guard I make no claim. But what I claim as my invention, is constructing the drag-bar and drill-tube, and connecting them, in the simple and substantial manner herein set forth. Also, the spring-guard-plate fitted in each delivery-opening between the hopper and the slide, to prevent the fracture or bruising of the seed when the slide is drawn suddenly back, as herein described.

No. 11,830.—Ebenezer Ford.—*Improvement in Granaries.*—Patented October 24, 1854.

This invention consists in constructing granaries and bins for grain with double walls *l*, partitions *i*, and floors, and filling the interspace with common salt, to protect grain from insects. A stove-fire is also necessary, to prevent the salt from attracting moisture, and thus injuring the grain. The inventor is aware that salt has been employed as a filling between the timbers of ships and between the two walls of ice-houses, but claims the mode herein described for making granaries, having the walls, floors, and partitions filled in with common salt, in the manner substantially as set forth.

No. 11,831.—Julius Herriet.—*Improvement in Gutta Percha Stereotype Composition.*—Patented October 24, 1854.

Equal parts, by weight, of gutta percha or caoutchouc, and pulverized graphite, or soapstone, or plaster of Paris, or chloride of lime, or peroxide of manganese, or other equivalent, are mixed together, heated, and moulded while hot. The proportions may be varied to suit the desired softness or toughness of the mass. The alleged qualities of the composition are plasticity, sufficient hardness to present sharp-angle lines and yet to resist pressure, aptness to be remoulded, and cheapness.

Claim.—The making of moulds and plates, for printing characters or figures, of gutta percha or India rubber, compounded with some other substance, substantially such, and for the purposes, as described. No illustration.

No. 11,832.—JOSEPH JOHNSTON.—*Improved Bran-Duster.*—Patented October 24, 1854; antedated April 24, 1854.

The machine is constructed in a more than usually substantial manner, with heavy cast metallic, vertical, and horizontal framing, which is connected by a system of conductors with the wire-gauge cylinder-beaters, and other portions, in such a manner as to avoid the clogging and other annoyances caused by the attraction of light matters, dust, bran, flour, &c., to the meshes of the wire-gauge, from the electrical disturbance kept up during the rapid revolution of the various parts of the machine.

Claim.—Constructing the frames of bran-dusters of cast metal, so as to secure the objects and advantages herein specified, in the manner described.

No. 11,833.—BARTON H. JENKS.—*Improvement in Looms.*—Patented October 24, 1854.

Claim.—The single spiral cam K in combination with the shifting-clutch 24 and lever L, for raising and lowering alternately a two-shelf shuttle-box, or holding the same stationary for a longer or shorter period, as set forth.

Also, the method described of rendering the pattern or pin-wheel capable of working larger patterns than it could heretofore work without increasing its size, by means of a multiplier J, whether the same be constructed, arranged, and connected with the wheel as described or otherwise, provided the wheel has its capacity increased thereby, substantially as set forth. Also, a shuttle-binder, whether placed in the front or back of the lay, in combination with a series of shuttle-boxes, in such manner that the binder will perform the ordinary duties of that instrument for every shuttle-box of a series however numerous, substantially as set forth.

Also, arranging and operating the shuttle-binder, independent of the shuttle-boxes, in such manner that it shall be withdrawn from the shelves at the proper time to allow the boxes to be moved without obstruction to it.

Also, the method herein described of clearing the shuttle from the picker, preparatory to raising or lowering the shuttle-boxes, by moving the shuttle from the outer end of the box a short distance by a slight forward-movement of the picker, or holding the picker slightly in advance of its extreme back position until the shuttle is in place, and then allowing it to retreat back from the end of the shuttle, whereby the picking mechanism detaches itself from the shuttle before the shuttle-box moves, instead of making the clearance dependent upon the motion of the lay or other parts of the looms, as heretofore.

Also, the construction of the shifting-cam for working the treadles, with its two screw-heads and nuts of unequal pitch formed on separate sections of the cam; the section which contains the thread of longest pitch being removable, so that a corresponding piece, with a thread of different pitch, may be substituted to adapt the cam to operating a variable number of treadles, and likewise to facilitate repairs.

No. 11,834.—JOHN G. MCNAIR.—*Improvement in Manufacturing Carpets of Rugs.*—Patented October 24, 1854.

Claim.—A new fabric, denominated tapestry-chenille, consisting of tapestry-chenille weft woven with the colors to produce the design, in sections, but without the ground-color of the intended design; which prepared chenille weft is afterwards woven into and combined with a Brussels ingrain or other web, which is to constitute the ground of the design.

No. 11,835.—GUSTAVUS and A. H. PALMIÉ.—*Prussian Needle-Gun.*—Patented October 24, 1854.

This invention consists in the application to a needle-gun of a cushioned valve-seat C^1 upon the end of the needle-bar *c*, to close the opening through which the needle passes into the charge, and to prevent concussions of the main-spring; also, in the application of a safety-locking-bolt G to the outside of the gun, being an independent positive stop, to hold the main-spring and prevent the discharge of the gun when desired.

Claim.—Same as above.

No. 11,836.—MYER PHINEAS.—*Pen-Holder.*—Patented October 24, 1854.

This invention consists in so constructing the metallic barrel of the pen-holder, that the tongue A of the blank shall form a spring, which will act not only on the length of the pen to retain it in the holder, but shall also act across it for the same purpose, by means of the spreading sides of the spring *b*, as shown in figure.

No. 11,837.—E. L. PERKINS.—*Improvements in Machinery for Polishing Paper.*—Patented October 24, 1854.

Claim.—The combination of a pressing-roll *e*, a bed-plate *c*, (over which the roll runs back and forth,) to support the paper beneath the roll, and feeding-rolls *s* and *t*, or the equivalent thereof; arranged to feed the paper across the bed-plate, with an intermittent motion, which alternates with the passage of the pressing-roll along the bed-plate; and this combination, whether the several parts be constructed and arranged as herein described or otherwise.

No. 11,838.—JAMES RENTON.—*Improvements in the Process of Making Iron Direct from the Ore.*—Patented October 24, 1854.

The improvement consists in combining with the combined deoxydizing apparatus *a b*, and puddling-furnace *e*, as described, the employment of a blast or blasts, to be forced on to the deoxydizing ore on the hearth or hearths, substantially as specified, to aid in decarbonizing the ore and increasing the heat, as specified.

No. 11,839.—JOHN H. RAUCH.—*Improved Sliding Pen and Pencil Case.*—Patented October 24, 1854.

The nature of the invention consists in forming three longitudinal slots *a b c* in the tube C, and a transverse groove *g*, in combination with a cylindrical turning-slide D, having a T-shaped slot G cut in its upper end; and spurs or pins *d e* secured to the pen and pencil-holders.

No. 11,840.—JOHN RICHARDSON.—*Improvement in Pen and Pencil Cases.*—Patented October 24, 1854.

This invention enables the operator to protrude the pen or pencil from the case at pleasure, by turning the sleeve *m*, to engage the pen or pencil, when either is desired. Two cases *p q* are also constructed so as to elongate the holders when in use, without preventing the operation of the sleeve.

No. 11,841.—JOSIAH SHANKLIN.—*Improvement in the Square, Scale, Level, and Bevel.*—Patented October 24, 1854.

The construction of this instrument is readily perceived from the drawing. To get the length of rafters, braces, stair-cases, &c., &c. The base of a triangle is four feet, the upright three feet: what is the hypothenuse? Take the instrument, loosen both screws, and slip the left end of the square until the fourth inch on it exactly coincides with the first inch on the cross-piece. Then turn the left-hand screw moderately tight. Raise the right end of the square until the third inch just clips the edge of the cross-piece, and it will strike the cross-piece at five inches; hence the hypothenuse is five inches. This instrument is adapted to use for the several purposes indicated by the implements upon which it is an improvement; and the manner of using it will be readily suggested to the mind of any practical mechanic upon inspection of it.

Claim.—The combination of the blades Z^1 Z^2 Z^3 with the grooves and thumb-screws, constructed and arranged in such manner that any instrument can be used for the purpose of a square, bevel, level, and scale, substantially as herein described.

No. 11,842.—BENJAMIN SHERWOOD.—*Improvement in Safes.*—Patented October 24, 1854.

In addition to the outer and inner casing of iron, the improvement in the construction of safes, secured by this patent, consists in a lining of thin brick or tile inside of the outer shell, and within that a layer of a composition of alum and clay, made into the consistence of mortar; which, when heated, shall give out water of combination, and otherwise resist the fire to which it may become exposed.

Claim.—In the construction of safes, the combination of clay with about an equal quantity of alum of commerce or any other salt that will

melt with dry heat, to form a fire-resisting and fire-annihilating compound, as above described.

Also, I claim placing in the safe, next the outer wall, a thin fire-brick or tile, to protect the composition from the contact of fire when the iron shall have burned through; arranged substantially as above described.

No. 11,843.—EMILE SIRRET.—*Improvement in Fastening Lamps to Lanterns.*—Patented October 24, 1854.

This fastening consists of a vibrating lever on the bottom of the lantern, pivoted at its centre, and carrying two bolts, pivoted near either end, moving the bolts in and out of the slots or grooves, and locking or unlocking the lamp on both sides at the same time. When locked, the handle of the lever is caught by a notch, and so retained by a spring.

Claim.—Fastening the lamp to the bottom of a lantern by means of a vibrating spring-bar carrying a bolt pointed near each end of it; said bolts passing through the bottom of the oil cup, to enter a groove or flange inside the bottom of the lantern.

No. 11,844.—O. W. WADE.—*Improvement in Stoves.*—Patented October 24, 1854.

The improvement consists in having the vertical sides of the casing to the fire-box double, the outer surface being of transparent material, mica or glass. Inside is a lining of earthen or metallic plates, removable at pleasure.

No. 11,845.—WM. WARWICK.—*Improvement in Mills.*—Patented October 24, 1854.

The bevelled friction roller, actuated by a set-screw, serves to adjust the nut and concave of the mill for grinding coarse or fine, and at the same time subserves the ordinary purpose of friction wheels.

Claim.—The mode of regulating the cut of grinding-mills, by the insertion of a travelling wheel, or anti-friction roller, in combination with the bevelled track on which the roller travels.

Also, the position of the thumb-screw, it being parallel with the handle, and not, as in other mills, perpendicular with the cutting-bar and shell.

Also, its use as a journal for the travelling roller.

No. 11,846.—BENJAMIN H. WRIGHT.—*Improvements in Rotary Steam-Engines.*—Patented October 24, 1854.

Claim.—1st. Whenever a central piston wheel is used, the double cylinder, the one sliding on the other, in the manner and for the purpose, and substantially the same, as set forth.

2d. The two parts separately and in combination, viz: the method

of inserting a single piece of packing *e* in the inner surface of the piston, through an aperture or recess in the latter, with a corresponding but limited cut in the piston wheel, together with the mode of protecting this aperture by the lateral overlap of the base or flanges of the piston.

3d. The double-oscillating valve V, having opposite wings, nevertheless preserving the advantage of a single wing through the peculiar outline or use of a lesser cylindric surface between the wings on the side of the piston channel, reducing the cut in the cylinder for the passage of the piston to the least practicable dimensions.

4th. The introduction, in connexion with a like cylindric surface, between the two wings on the opposite side of the valve, of a partition *p* and separate chamber, adjacent to the other wing, for the purposes explained in the foregoing specification.

5th. The arrangement, in connexion with the oscillating valve V, of the induction and eduction passages O and O^1, such that the first opens just at the termination of the revolution of the valve athwart the piston channel; and the second by an aperture in the valve cap, uncovered by the opposite wing. When the valve is in the position before stated, the purpose of the arrangement being to promote regularity of movement and the working of steam expansively. I claim, also, the method of compensating for the less ready action of steam directly on the piston by the use of the tappets *t t*, which are forced, by the revolution of the valve, down the abrupt inclination of an exterior cam-wheel.

6th. I claim separately the passage through the valve *b*, commencing near its periphery and terminating at the plane surface, or valve-seat, as described, and as a combination for bringing the valve down across the piston channel. I claim the combined action, 1st, of the entering steam on its adjacent end of the valve; 2d, the steam passing through the valves, entering its induction wing from the piston channel, and discharging from the eduction wing against the valve-seat; and, 3d, taking away to any desirable extent the resistance in the separate chamber behind the eduction wing, substantially as described.

7th. I claim the method specified of balancing the pressure on the cylindrical cut-off valve; that is to say, by the removal of a suitable extent of surface Z Z, diametrically opposite to the passages; or when there are two passages proximately situated, it is obvious a middle point may be used. These cuts or openings not being designed for steam passages, it is evident that their size or dimensions will be governed by totally distinct considerations.

8th. I claim governing the velocity of the engine by changing the position of the eccentric disk, which governs the motion of the cut-off valves, by the lever L, from the governor; said disks when thus changing having a transverse motion on the shaft.

9th. I claim the annular steam-chamber 2, formed in one of the heads opposite to the piston channel, with branches to the cut-off cylinders respectively; and a like chamber 2 in the other head as a common receiving-chamber for the eduction ports.

No. 11,847.—WALTER BRYENT, assignor to JOHN B. KELSEY.—*Improvement in Air-Heating Furnaces.*—Patented October 24, 1854.

Claim.—The improvement is in the construction of the radiator, arranged over the dome of the fire-pot, the same consisting in making its bottom a concavo-convex plate or arch, and with the concave side disposed downward and directly over the said dome, whereby the ascending heat of the dome is retained in the concavity of said bottom, and not only made to warm to great advantage the air that rushes into the same, but to heat the radiator, so as to improve the draught through the fire-pot and supporting columns of the radiator.

No. 11,848.—WILLIAM CAMPBELL, assignor to Himself and E. W. SHIPPEN.—*Improvement in Bearings for Loose Pulleys.*—Patented October 24, 1854.

The object of this improvement is to supply a bearing for the loose or "dead" pulley around and independent of the shaft, (whether by a sleeve or tubular journal R, surrounding the shaft, and not in contact with it, or by friction rollers to receive the belt,) so that the wear from the running of the said loose pulley shall not be borne by the shaft.

Claim.—What I claim as my invention is a loose or suspension pulley or pulleys and hanger, having an axis whereby a loose pulley may revolve independently of the shaft.

No. 11,849.—WILLIAM PORTER, assignor to JOSEPH N. HOWE.—*Securing Lamps to Lanterns.*—Patented October 24, 1854.

The merit of this invention lies in the arrangement of the spring-bolts for readily fastening or detaching the bottom of the lantern, which carries the oil-pot, and the drip-cup for preventing waste and dirt from an overflow of oil.

Claim.—The above-described lantern, constructed substantially as described.

No. 11,850.—MARK R. PEARSON, assignor to MARK R. PEARSON and SAMUEL SHAW.—*Improvement in Roller-Catch for Self-acting Mill.*—Patented October 24, 1854.

Claim.—The combining with the catch H and the ratchet D, the arm K and its friction brake L, or its equivalent.

No. 11,851.—NATHAN ATHERTON.—*Improvement in Steam-Engines.*—Patented October 31, 1854.

The improvement-relates to a driving cylinder T W, having screw-like grooves in combination with a piston-rod, for the purpose of converting reciprocating into continuous rotary motion; and the improvement consists in the connexion of such a cylinder with inclined projections *g h*, constructed and arranged substantially as herein described, for operating the valve-gear H K L I V, *i i*, by motion taken

directly from the cylinder, whereby the proper lead may be given to the steam, whether the cylinder be turning to the right or to the left.

No. 11,852.—ABRAHAM BASSFORD.—*Tuning-Keys for Pianos.*—Patented October 31, 1854.

This invention consists in combining the socket spindle *a* with the handle spindle *i*, by means of cog-gearing *m e* and *d*, for the purpose of increasing the leverage of the handle spindle, relatively to the socket spindle, and at the same time have the axes of the two spindles in, or nearly in, the same line; and also in combining these with an arm or lever rest *h*, projecting from the plate g^1, to come in contact with some part of the frame of the piano in the operation of tuning.

No. 11,853.—A. M. and G. H. BABCOCK.—*Printing Press for Printing in Colors.*—Patented October 31, 1854.

This invention aims to print different colors, successively, on the same sheet, as it is carried upon a revolving platen; and its features are thus set forth in the claims made by the patentees:

Claim.—1st. The arrangement and combination of the polygonal platen *f* and beds *d*, substantially in the manner and for the purposes set forth.

2d. We also claim the construction and arrangement of the inking rollers, consisting of the vibrating arms *k* and springs *m* for holding out the rollers in place, as described.

3d. We also claim the combination of arms *g h*, *i* i^1 i^2 i^3, and c^1 c^3, or their equivalents, and connecting-rods *i* c^4, or their equivalents, for giving a series of impressions, forming progressive levers, in the manner specified.

4th. We also claim the apparatus for turning the prism, consisting of the vibrating arm S, disk S^1, springs and pins i^1, or their mechanical equivalents, with the apparatus for engaging and disengaging the same, as set forth.

5th. We also claim the arrangement and combination of the friskets *w* with the platens *f*, and the springs y^1 attached thereto, for giving a firm hold while drawing the sheet from the type.

No. 11,854.—CHARLES BAEDER.—*Improvement in the Mode of Cutting Gradually Tapering Strips of Raw and Tanned Hide for Whips.*—Patented October 31, 1854.

This invention consists in the employment of a die *b*, upon which is the knife, resembling in form a coiled watch-spring, the coiled space between the cutting-edges gradually widening from near the centre of the die to the periphery of the same, so that the strips filling them will have the required width and taper. The knife is made of steel.

Claim.—The use of the spiral knife-die, to cut gradually tapering strips of leather for the manufacture of raw-hide and braided whips, substantially as set forth.

No. 11,855.—Joseph Barker.—*Improvement in Grain Winnowers.*—Patented October 31, 1854.

The improvement consists in employing the conical form for the screens, by means of which the grain is caused to pass over a great surface of screen, and to spread equally in all directions; thus, as it is alleged, being more perfectly cleansed than where the rectangular form is employed. The operation is as follows: The grain to be separated is placed in the hopper C, and shaft B being set in motion, the fan F rotates with it, while the two screens D G receive at the same time a rotary vibrating motion by the wiper-wheel L and levers *i j*, thus causing the grain passing through *e* upon D to spread radially over it and towards its end, whereby the sound grain passes through, while the superfluous foreign stuff of larger size passes off at the edge, and the light impurities are blown away by the blast from the fan; the grain then falls upon the shute E, which covers the fan F, and falls off of said shute upon the screen G, which is sufficiently fine to retain the grain but not the dust; the grain passes through the discharge-spout H into a proper receptacle, while the dust and other fine impurities are discharged through the spout J of the shute underneath the screen G.

Claim.—The combination of the conical hopper C, circular screens D G, with inclined sides or of conical form, and fan F; the said parts being constructed and arranged substantially as shown, and for the purposes set forth.

No. 11,856.—Ephraim Brown.—*Burglar's Alarm for Money-Drawers.* Patented October 31, 1854.

Claim.—1st. Making the drawer-knob movable, and so combining it with an alarm apparatus as to cause the alarm to be sounded at every attempt to open the drawer.

2d. The combination of the spring-bolt and secondary bolt b^1 and lever *d* with the drawer-knob.

3d. The combination of the alarm-pawl *m* with the knob by means of movable hanging-lever *n*, to be operated by a stud fixed to the knob-rod *s*.

4th. The decoy-key d^1, and its connnection with the hanging-lever *n*; also, connecting the latter to the secondary key or lever g^1, (which is not shown in the drawings, as it is on the same axis *f* and of the same dimensions as d^1, and exactly behind the latter,) so that a forward pull on g^1 shall move the hanging-lever *n*, so as to sound the alarm.

5th. The combination of the numbered wheel p^1 and its operative mechanism with the knob-rod, (i. e., the pawl l^1 fixed to the lever *n*, and working against ratchet n^1 on the shaft o^1, which shaft also carries wheel p^1,) so as to exhibit, through a slot in the centre, the number of the attempts at opening the drawer; meaning, also, to claim the so combining the operative mechanism of the wheel p^1 with the hanging lever *n*, that a movement of the latter will effect a movement of the said wheel.

No. 11,857.—WILLIAM CLEMSON.—*Improvement in Apparatus for Tempering and Flattening Hardened Saws.*—Patented October 31, 1854.

The improvement consists in making the ends of the plates, which the saw enters, with their faces of bevelled or other receding form, substantially as shown at *c f*, whereby they are enabled to impart heat to the saws by radiation before they enter, and thus cause every part of the saw to be heated to a proper degree before being submitted to the pressure of the upper plate.

No. 11,858.—H. H. EVARTS, assignor to Himself and A. J. BROWN.—*Shingle Machine.*—Patented October 31, 1854.

This is an ingenious and complete machine for sawing shingles from the block. A block Y (in the drawing represented in broken lines) is placed on each table P P^1; is seized by dogs, actuated by H and teeth t^1, and carried by the saws A as the cogged rim F revolves; the tables P P^1 are so inclined in respect to saws as to give the required taper to the shingle; the lever cams H are rocked on fulcrums in the rim D by cams n^1 n^1, so that two at a time of the dogs *i* shall pierce the block just as it arrives near the saw, or at Y, by which time the other two dogs *i*, which form the block, thus far are withdrawn; thus but two dogs, together with the teeth t^1, carry a block around. It must be observed, that, to give the proper taper, the beds P P^1 slope inward and downward from the saws, the angle required; as the block always bears against this bed, as it meets the saws, the taper necessarily results. The block is sawed alternately from end to end, giving the thin and thick ends of shingles alternately from each end of block. As soon as one shingle is cleared, it drops, and the dogs *i*, now holding the block, are withdrawn, (by cams n^1 n^1,) and the block drops a distance equal to the thickness of the shingle just formed on the bed H, and is in the exact position to meet next saw, just before clearing which, two dogs *i* quickly clamp it and hold it until past this saw.

Thus it may be seen that a block placed on one of the tables, and the machinery being in motion, the machine will convert it into shingles without further manual assistance.

In the drawings, figure 1 is a plan of the machine, and represents only one half of it, the other half being exactly alike.

No. 11,859.—JUNIUS FOSTER.—*For Ringing Alarm-Bells.*—Patented October 31, 1854.

This invention consists in combining the spring-barrel *d*, the zig-zag groove cut in its periphery, the lever *h*, the bell *l*, and the stop *g*, operating against the pins 8, for the purpose of causing the bell to be rung when a door to which it is connected is opened.

No. 11,860.—WILLIAM GATES, Jr.—*Machine for Filling Match-Frames.* Patented October 31, 1854.

This machine is designed to place matches securely in a frame, so as to insure dipping their ends equally into the inflammable composition.

Operation.—The match-sticks, designated by a^1, are placed on the box or hopper F, and a follower b^1 placed on the top of them, and slots or strips c^1 are placed between the uprights *q q* on the bed-piece M, a follower being placed upon them. Motion being communicated to the driving-shaft D, the vibrating frame B is drawn backwards, and also the feeding-bar N, and the projections *r r* force the lowest slats or strips c^1 outward from between the uprights *q q*, and the pressure-rods *o o*, then descend upon the slat or strip and force it down upon the rests *n n*, on the block K, the pressure-rods being depressed by the pin *v* acting against the rod U, and elevated again when the rod is relieved from the pin by the spiral spring U^1. The vibrating frame B now moves forward, and the rods *a* force out the match-sticks *d* from the box or hopper F—that is, those matches that were in the groove *d;* the match-sticks pass out between the strips or bars *i*, and upon the slat or strip c^1, which was previously operated upon by the projections *r r*. The vibrating frame B then recedes, and the feeding-bar N again moves forward, and throws a slat or strip upon the match-sticks, it being understood that the ends of the slats or strips fit in the grooved sides of the match-frame. When the vibrating frame B again moves forward, the feeding-bar N acts against the upright pins *t t*, and the levers W W force forward the gauge-block V, and press it against the edges of the match-sticks, and bring them all upon a line.

Claim.—I do not claim any of the parts relating to the operating of the match-sticks, viz: forcing them from the box or hopper F, for that has been previously invented; but what I claim as new is the feeding-bar N, with its projections *r r*, pressure-rods *o o*, and gauge-block V, with the springs W W, or their equivalents, combined and arranged substantially as shown, for the purpose of feeding the slats or strips c^1 properly to the match-frame J, and adjusting them therein, and also causing the ends of the match-sticks to be on a level, to insure an equal immersion in the necessary compound, with which they are covered.

No. 11,861.—ROBERT HENEAGE.—*Improvement in Toothed Clothing for Picking-Cylinders.*—Patented October 31, 1854.

Claim.—The improved manufacture of metallic clothing for a picker cylinder, the same being made of a thin plate of metal, with the teeth cut or stamped out of it, and bent from and directly above, and so as to stand at angles with the spaces from which they are cut, as specified.

Also, so arranging the base plates of the teeth on the periphery of a cylinder, or the surface to which they are to be fastened, that one of said base plates shall overlap the other, and extend over and cover the spaces *b b*, or out of which the teeth of the latter plate may have been formed, the same serving not only to give support to the teeth, but to prevent such spaces from being clogged with fibrous material, and also

to increase the pitch of the front ends of the teeth beyond what they would have were the entire lower surface of each strip made to rest upon the surface of the cylinder.

No. 11,862.—J. C. Howe.—*Breech-Loading Fire-Arms.*—Patented October 31, 1854.

This invention consists in a simple arrangement of devices, whereby the movable breech A can be drawn back and elevated by pressing forward the lever C; and by the backward movement of the lever the breech can be lowered and forced forward into place.

Claim.—The arrangement of the breech-operating lever C, by its hinges or joints *a* and *b*, with the breech A, hung and operating as described, and movable guide or slide D at the back of the breech.

No. 11,863.—J. Harris, J. B. Stott, and G. Richmond.—*Improvement in Machinery for making Rope and Cordage.*—Patented October 31, 1854.

Claim.—The arrangement of the gears *s* and *t* upon shaft N, in combination with the clutch and shaft I, so that by changing the position of the clutch we increase, retard, or arrest the motion of the friction rim B, and reverse these motions instantly. Also, the spider G, constructed as described, in combination with the cam K and the spiral spring on the shaft to give it a revolving motion, to rub the strands for the purposes described.

No. 11,864.—Chesley Jarnagin.—*Wagon Seats.*—Patented October 31, 1854.

This invention consists in constructing the running-gear of wagons with a double bolster, provided with the standards D D in each end, so as to allow of a comfortable and safe seat C for the driver, to be placed between said standards.

No. 11,865.—Richard Kitson.—*Improvement in Machinery for Picking Cotton and other Fibrous Substances.*—Patented October 31, 1854.

Claim.—Providing the cylinder or other foundation to which the picking-teeth are secured with orifices or perforations *d*, distributed in all directions among the teeth, for the purpose of blowing a number of streams of air among the teeth from the under side of and through the fibres, and thereby expelling outwardly, during the picking operation, all dust and dirt, and loosening the fibres, and finally blowing them from the teeth, as set forth.

Also, the method of securing the teeth H in the cylinder by means of notched strips I and shoulders *h* on the teeth, as described.

No. 11,866.—JOHN M. KRIDER.—*Improvement in Tailors' Measures.* Patented October 31, 1854.

This improvement pertains to those tailors' measures in which protractors are used for obtaining the direction, in connexion with tapes for obtaining the distance from a fixed point on the measure to any given point on the body; and consists in applying said protractor T, with its metal tape S, among other points on the measure, at that marked 2, where it has not heretofore been placed, and by which, for the first time, the tailor is enabled to determine directly, and by one measurement, the cardinal point A. In use, the measure is applied under the shoulder, the point 1 and strap A' passing round the back horizontally, and the other end being passed over the shoulder, so that the point 2 falls on the shoulder-blade.

Claim.—The use of the protractors T at the point indicated by stud 2, for the purpose of determining the cardinal point A at the top of the back seam, in the manner described.

No. 11,867.—SAMUEL LENHER.—*Syphons.*—Patented October 31, 1854.

The inventor has obviated the use of various similar devices for partially exhausting the air within the syphon by a simple and effective one around the larger arm; near its extremity he places a packing C, fitting neatly the tubular cap-pipe D. This cap-pipe, being closed at one end and being thrust over this packing, will, on being quickly withdrawn, produce the effect desired.

No. 11,868.—WARREN LILLIBRIDGE and CHARLES F. LILLIBRIDGE. *Improvement in Flexible Measures.*—Patented October 31, 1854.

This measure is formed of two steel springs *a b*, shown in figure 2 on a large scale, having between them a strip of leather *c*, the whole wound with fine wire *d*, so that the spring will be capable of a longitudinal motion under the wire.

Claim.—The construction of flexible measures substantially as herein set forth, so as to retain and show the form as well as the dimensions of the surface measured.

No. 11,869.—JAMES EDWARD MCCONNELL.—*Improvement in the Construction of Hollow Railroad Axles.*—Patented October 31, 1854.

The improvement consists in constructing hollow axles of bars of wrought iron running lengthwise, the edges lapping into each other by joints, substantially such as are shown by figures, and which are welded and worked into form, as herein set forth.

No. 11,870.—DANIEL MOORE.—*Breech-Loading Cartridge.*—Patented October 31, 1854.

This invention consists in forming the base of the cartridge of a cone 1, so as to concentrate and pass the flash from a detonating-cap to the apex of the cone 4.

No. 11,871.—DANIEL MOORE.—*Breech-Loading Powder-Flask.*—Patented October 31, 1854.

This invention consists in attaching a pipe *c* to the flask *a*, whereby said pipe forms a ramrod to force the ball into the barrel the required distance, and at the same time measures the powder for filling the chamber behind the ball.

No. 11,872.—VINCENT PALEN.—*Improved Apparatus for Sawing Off Piles under Water.*—Patented October 31, 1854.

This invention consists in the combination of several devices for guiding and holding the saw *a* up to the kerf, so as to prevent it from cramping and buckling in its kerf, viz: the arrangement of the guides L L and saw-shaft H on the adjustable frame D.

No. 11,873.—JOHN RICHARDSON.—*Improved Pen and Pencil Case.*—Patented October 31, 1854.

This is an arrangement of mechanism to protrude or retract the pen or pencil, at the same end of the case, by the act of extending the case to protrude the pen or pencil, and contracting the length of case to draw them in again. This is accomplished by means of racks E and G, and a spur-wheel F, made so as to turn, and engage the pen or pencil when desired.

No. 11,874.—Cancelled.

No. 11,875.—E. W. SCOTT.—*Machine for Manufacturing Mast Hoops.* Patented October 31, 1854.

This machine is similar to another having rotary cutters for operating on wood. The material is fed, by two ordinary feed-rollers, under the cutters F E, each of which finishes one-half of the round part, the flat side being previously finished. The piece passes between yielding guide-rollers *h s u*, and is allowed to take the course of the grain. The usual pressure-rollers, etc., are used. In the drawing the material is represented in broken lines.

Claim.—The arrangement of the devices mentioned for this purpose.

No. 11,876.—WILLIAM J. STEVENSON.—*Improved Soldering Furnace.* Patented October 30, 1854.

By the common process the work of soldering the bottom of tin cans is frequently attended with disfigurement of the article, and waste of time. The fire of the soldering-furnace being admitted to the whole bottom of the can, melts off the tin; by this device, however, the melting heat is allowed to act only on the groove and lap; a ring of solder being dropped into the former, at once firmly unites the two together. The top of the can is heated in the same manner.

Claim.—Providing a soldering-furnace with an air-tube B, and a recess *a a*, or their equivalents, so that the entire circumference of each of the joints of the can shall be soldered all at once; and during the performance of the same, no other parts of the can besides the lap and that portion of the bottom or top upon which the ring of solder lies exposed to a melting heat, substantially as, and for the purposes, herein described.

No. 11,877.—SAMUEL R. THORP.—*Improvement in Odometers.*—Patented October 31, 1854.

On the inner end of the hub of the wheel an eccentric band *d* is attached, the edge of which engages with a flexible spring *a b*, causing it to vibrate horizontally, the said spring being confined at the float and rear end of the odometer-box, so that, as the wheel rotates, the centre of the spring is caused to vibrate as stated. Near the centre of the spring a catch *c* is secured, which, as the spring vibrates, engages with a ratchet wheel 1, causing said wheel to rotate, and, by means of a worm *n*, to rotate a notched wheel marked 2. This notched wheel sustains an index-hand passing on a dial, to indicate the distance travelled.

What I claim as my invention, is the peculiar combination of the spring *a b* with the band *d* and the ratchet-wheel 1. All else I disclaim.

No. 11,878.—JULIUS THOMPSON.—*Improvement in Odometers.*—Patented October 31, 1854.

The nature of this invention consists in the peculiar means employed for communicating motion from the wheel of the vehicle to the working part of the implement, viz: by having a cylindrical weight placed within the case of the implement, said weight being detached, and by its own gravity remaining stationary, or not revolving with the wheel, and causing, as the wheel rotates, motion to be communicated to the working parts of the implement. This odometer is attached to the outer end of the hub of the wheel.

Claim.—Communicating motion from the wheel of the vehicle to the working parts of the odometer, by means of a cylindrical weight on wheel D, placed within the case of the implement and detached therefrom, so that said weight or wheel will, by its own gravity, remain at the lower part of the case in one position, and by the arrangement herein shown, viz: the fork E and excentric F, or other suitable device, communicate the necessary motion to the working parts of the implement as the case A rotates.

No. 11,879.—SAMUEL VANSYCKEL.—*Improvement in Grate-Bars.*—Patented October 31, 1854.

Claim.—The casting or forming the pins, dowels, or catches *a a*, in one bar or set, with a corresponding hole *c c*, or its equivalent, in the

next bar or set, so that, when put together, they shall be held from warping, twisting, or dropping from the end plates or walls, substantially as described.

No. 11,880.—R. A. WILDER.—*Improvement in Spark-Arrester and Water-Heater.*—Patented October 31, 1854.

The improvement consists in the arrangement of the water-space *f*, the flue-spaces *m* and *c*, and the perforated cone *e*, all concentric with each other, in the manner and for the purposes set forth.

No. 11,881.—S. R. WILMOT.—*Water-Meter.*—Patented October 31, 1854.

This meter measures the water by registering the reciprocations of a piston within a cylinder of known capacity. The length (about fifteen pages) and details of the specification render it only possible to give the claims here.

Claim.—1st. Extending the sides of the piston upward in the form of a tube E, to enter an open-bottomed but closed-top chamber *b*, wherein a quantity of air, or its equivalent, is so confined as to press equally on the water above and below the piston, and thus prevent its overflowing the top of the tube on either side, hence to form an effectual air-seal, or packing, and allow the piston to be fitted to the cylinder so loosely as to produce no friction.

2d. Enclosing all the mechanism actuating the valves within the cylinder itself, or within a chamber having free communication with the same, as shown; thus avoiding the necessity for stuffing-boxes, or packing for the valves, rods, or other parts connected with the valves, and the consequent expense of construction, and friction of such packings, is essentially obviated.

No. 11,882.—ALONZO S. WOODWARD and BENJ. F. BARTLETT.—*Improvement in Machinery for Culling Rags for making Paper.*—Patented October 31, 1854.

Claim.—The cylindrics B B, constructed as described, for the purpose of cutting paper, rags, and paper stock.

Also, the cylindrics B B in combination with the cutting-knife F, when arranged and operated as set forth.

Also, the combination of the two sets of feed-rolls M M and Q Q with the cylindrics B B and knife F, one set of the feed-rolls running at a higher speed than the other set, Q Q, for the purpose of evening the stock before it reaches the cylindrics and cutting-knife.

No. 11,883.—WILLIAM SEWELL.—*Improvement in Surface Condensers for Steam-Engines.*—Patented October 31, 1854.

The improvement consists—

1st. In the elastic supplementary tube sheets, constructed and applied substantially, and in the manner and for the purposes, herein described.

2d. In the method for preventing the endwise sliding or creeping of the tubes, by means of a metallic sheet pierced with holes, or a metallic grating or series of bars *g*.

3d. In so constructing the guard *g* that it performs in addition to its own duty the further office of holding down the edges of the elastic tube-sheet, preventing the entrance of water behind the same; and,

Lastly, the injection or showering apertures in combination with a surface condenser, wherein the steam-space is outside of the tubes, and which is also provided with proper entrances and discharges for circulating water through the tubes, whereby a surface condenser may be converted at will into a jet condenser.

No. 11,884.—DANIEL C. AMBLER.—*Improvement in Sewing Machines.*—Patented November 7, 1854.

The object of this invention is to produce a felling-down stitch, by means of which two pieces of heavy stuff can be sewed together when the edges overlap each other, as in the seams of sails, awnings, &c.

Claim.—The method described of sewing a felling-down or zigzag seam by means of vibrations in a line perpendicular to the seam, or nearly so, imparted either to the needle or the cloth.

Also, the combination with a needle having such motions, or the equivalent thereof, of a shuttle, thrown in a direction perpendicular or nearly so to the general direction of the seam, substantially in the manner and for the purpose specified.

Also, an automatic lever for clamping the thread upon the up-stroke of the needle.

Also, imparting to the needle a partially reciprocating rotating motion upon its own axis, in the manner and for the purposes set forth.

Also, connecting two vibrating needles, each to each, in the manner set forth, whereby one vibrating mechanism serves for both needles, and said needles may also be adjusted so as to sew seams simultaneously at any required distance apart, substantially in the manner described. The automatic lever referred to in the above claim is the small bent lever *m*, (see the drawing,) pivoted at m^1 and attached by means of a hanger m^2 to the needle carriage. One end of this lever is weighted at m^3; the other end of *m* is bent at right-angles as at m^5, under a projection of m^6, and the thread passes between m^5 and m^6 to the needle. As the needle descends, the drag on the thread pulls m^5 down, and lifts m^3, allowing the thread to pass freely. When the needle ascends, the direction of the drag is altered, and the thread has no tendency to lift m^3, which holds it between m^5 and m^6, until the up-stroke is completed.

No. 11,885.—JNO. B. BRENNAN.—*Improvement in Locks.*—Patented November 7, 1854.

Claim.—Placing the side tumblers *h* between the two arms *c* and F, one of which, F, is attached to the bolt B, and the other arm, *c*, to the bolt-tumbler C; the tumbler *h* having recesses cut in them at each end, and arranged and operating in the manner substantially as set forth.

No. 11,886.—ALBERT BROUGHTON.—*Improvement in the method of Polishing Stone.*—Patented November 7, 1854; antedated October 24, 1854.

The nature of this invention consists in polishing the surfaces of stones by means of a horizontal rotating plane of stone, or other suitable material, combined with apparatus for holding the stones whilst their surfaces are being polished, arranged in such a manner that the polishing friction exerted by the rotating plane upon the surfaces of the pieces of stone will cause them to rotate upon the axes of the frames which hold them above the revolving plane or disk. The letters *c c* represent the segments of stone which form the rotating plane or disk, placed and secured upon the wooden wheel A, which wheel is supported upon the shaft *d*. *k k* are the stones, suspended in the frames *b b*, *l l*, upon the spindle *e*, connected with the crane *g*.

Claim.—Causing the stones polished to be rotated around their own axes, or the axes of their receiving frames, by the polishing friction produced by the rotating polishing surface upon said stones, substantially as herein set forth.

No. 11,887.—ROBERT S. CRAIG.—*Improved Rat-Trap.*—Patented November 7, 1854.

This invention consists in the combination of the several parts shown, whereby the animal is made to shut himself in by pulling on the bait-hook K, and thus releasing the latch I, which then allows the wheel D to revolve and release (by means of the cords L) the trap-doors G G. The animal, being now imprisoned in the dark, seeks escape through a door in front of the hanging-door Q, which has been opened by means of the catch I hooking on to the bent rod S, and thence through the hanging-door Q; in raising which door Q, the detent T is drawn down to release the wheel D, which again revolves, and places the doors G G and the front-door in their first position.

No. 11,888.—REUBEN DANIELS.—*Water-Wheel.*—Patented November 7, 1854.

The inventor claims an improved joint between the outer rim of the wheel and the annular cap containing the series of shutes. This may be seen at *c c*, in which C represents the shutes and E the wheel, the peculiarity consisting in serrating alternate sections of the rim of the wheel, with the view to more readily clear said joint from any accidental substances, such as weeds, grass, twigs, &c.

Claim.—The claim is to this joint.

No. 11,889.—FERDINAND DAVISON.—*Improvement in Machines for Drilling Stone.*—Patented November 7, 1854.

This invention consists in the means by which the drill-bar is raised and released. See figure.

Claim.—The peculiar device for clamping and releasing the drills or drill-bars, consisting of the dog D, to which the chain or its equivalent is attached, and the trigger H, for locking and unlocking the same on the drill-bar; said dog and trigger being constructed, combined, and arranged within the catch-block C, substantially as described, so that the latter locks the former at the termination of the descent of the catch-block, and unlocks it at the termination of the ascent thereof, by striking some parts of the framing of the machine, or certain fixtures provided for the purpose.

No. 11,890.—JACOB GREEN.—*Improvement in the Art of Manufacturing Glass.*—Patented November 7, 1854.

In making use of this invention, the fire-chamber of the furnace is charged with fuel from three to five feet thick; then a sufficient quantity of air is forced through the pipes *g* into the ash-pit, the ash-pit door being closed; the air passing through the burning fuel, produces the combustible gases. (The damper *r* is regulated by the workmen.) Then a sufficient quantity of air is forced through the valves *s*, and becomes heated while passing through the heated pipes *i i*, and is distributed through the nozzles *m m*, in numerous small streams, thus uniting with the combustible gases in passing through the flues *t t*, producing a clear, steady, and intense heat in the furnace. The valves *s* are regulated by the workmen for the complete combustion of the gases.

Claim.—The introduction of a blast of hot air among the combustible gases after they have left the fire-chamber, and during their passage through an intermediate flue; so that the combustible gases and hot air may enter the furnace together, well mixed, and, through the presence of a sufficient supply of oxygen, effect an entire, or nearly entire, combustion of carbon and other combustible matter in the furnace, and consequently a great saving of fuel, and better color and quality of glass. The drawing represents only one half of the furnace, the two halves being exactly alike.

No. 11,891.—SAMUEL GUMAER.—*Corn-Sheller.*—Patented November 7, 1854.

In this machine A A are two rollers, in the form of truncated cones. They are armed with teeth C C, and work against spring-brakes 1 2 3. As the ears of corn leave the hopper J, they are brought (by the rollers) against teeth *d*, which cut down the large ends of the ears before the latter pass out.

Claim.—The carrying of the ears of corn from the hopper against the brake *d*, by means of the rotation of the cylinder, where the larger portion of the ears are first reduced, preparatory to their being finally divested of the grains, as described.

No. 11,892.—Sheldon S. Hartshorn.—*Improvement of Buckles.*—Patented November 7, 1854.

This improvement consists in making the buckle of three parts, represented in the figures. Fig. 1 is the finished buckle, fig. 3 the tongue, fig. 4 is that part of the buckle to which the standing part of the strap is to be attached, fig. 2 the wire frame.

Claim.—The manufacture of a buckle of *three* parts, by dies or swedges, in such manner that the two ends of the wire of the main frame shall be secured by the socket of the tongue-part, while the other part will have a free, independent motion, when the whole is constructed and fitted for use substantially as described.

No. 11,893.—A. K. Hay.—*Improvement in Glass Furnaces.*—Patented November 7, 1854.

This improvement consists in making a circular trench A around the fire-pot B, and between it and the siege or bench C, for the purpose of receiving the melted glass when the pot overflows or breaks.

Claim.—The trench around the fire-pot and between it and the siege, for the purposes herein set forth.

No. 11,894.—Horace S. Higgens.—*Barrel Machine.*—Patented November 7, 1854.

Claim.—The combination of the shaft A with the sectional expanding cutter-rim D B, for the purpose of chamfering and crozing barrels.

About shaft A, a rim B D, in sections H, F, G, E, is secured so that said sections may move outward or inward independently. These carry knives S to chamfer, and others, *h*, to croze, and others, *g*, to plane the end evenly. The barrel being placed on the rim D B, the sections are allowed to expand outward and fit themselves to the curvature of the cask, by loosening the springs *d b* from catches *n n*. The shaft A being revolved, the result is effected.

No. 11,895.—Thomas Kendall.—*Improvement in Bottle-Stoppers.*—Patented November 7, 1854.

The improvement consists in so constructing the screw-thread of the stopper and neck of a bottle, that the upper face of the thread in the stopper, and the corresponding recesses in the neck, shall be at right angles, or nearly so, to the axis of the neck, by which the firmest of all attainable bearings of a screw-stopper is obtained against any pressure within the bottle.

Claim.—The construction of bottles, jugs, or jars, with a tri-threaded screw in the neck of each, for the purpose of holding safely the cork or stopper thereof, and the convenience of inserting or withdrawing the same; the thread of the said screw having a peculiar form and bevelled surface, indicated by the form of the core on which said bottle-necks are to be formed, and which is herein described.

No. 11,896.—Joseph Leeds.—*Improvements in Furnaces for Warming Buildings.*—Patented November 7, 1854.

The improvement consists in arranging together in one furnace several devices, to wit: for more perfectly consuming the carbonaceous gases rising from the fuel, deflecting the heated current, reversing its direction, causing it to impinge against numerous and extended surfaces, which absorb all the heat before the incombustible gases are permitted to escape.

Claim.—In combination with the chamber above, the fire-box the deflector L and frustrum N, with the exit-pipe, M, passing through it, for the purpose of regulating the draught, and throwing it from the centre towards the side of the burning mass, and thus producing equable combustion, substantially as described.

No. 11,897.—E. E. Marcy.—*Improvement in Vulcanizing Elastic Gums.*—Patented November 7, 1854.

The improvement and claim consist in the use of selenium for curing the elastic gums, in the place of sulphur, generally well known for such purpose. No illustration.

No. 11,898.—William Nelson Martin.—*Improvement in Coal-Hods.* Patented November 7, 1854.

This hod is constructed with a chamber C, for receiving the coal-dust, &c., as it falls through the grates F and I. The ordinary motion of the hod for discharging its contents into a stove effects the separation of impurities from the coal, the impurities falling into the chamber below, and which, when so separated, cannot again mingle with the coal. The coal-dust, &c., is discharged when necessary from the orifice A.

Claim.—Separating the main central chamber of a coal hod or bucket from the outer sides and bottom of the same, by an interior lining of sheet-metal, partially perforated, or of sheet-metal and wire grating combined, in such manner as to form a dust-chamber between said lining and the exterior of the hod or bucket, open at the rear and closed in front, by which the coal only will be discharged at the front side of the bucket, and the dust be deposited in the said dust-chamber; and when the coal is all discharged from the bucket, the dust can be removed from its receptacle therein by movements the reverse of those required in discharging the coal from its receptacle, substantially as herein set forth.

No. 11,899.—Ives W. McGaffey.—*Improvement in Potato-Diggers.*—Patented November 7, 1854.

In this machine, E uncovers the potatoes, whilst F digs them. Then two endless chains I and J (driven by cog-wheels upon the hind axles) carry two series of wings K and K^1, which sweep the screen or

separator G, through which the dirt falls, carrying the potatoes up to fall into the box or receiver M.

Claim.—Arranging two endless chains of elevators I J on drivers, (which have their axles standing at right-angles, or nearly so to the screen and digger,) and having the elevators of one of said chains come opposite the spaces of the elevators of the other chain, substantially as and for the purposes herein set forth.

No. 11,900.—B. McKeage.—*Sawing Bolts for Staves.*—Patented November 7, 1854.

The inventor finds that better staves are obtained by cutting the bolts from the block as shown in the figure, in sections whose sides or bounding planes do not pass through the centre or heart of the log, but pass tangent to it or to a circle of a certain size described around the heart.

No. 11,901.—Elliot T. Miller.—*Bomb-Shell.*—Patented November 7, 1854.

This invention consists in perforating bombs or shells with cylindrical apertures or barrels, communicating with the powder chambers in such a manner that shot or other missiles with which said barrels are loaded shall be projected therefrom simultaneously in all directions radiating from the centre of the shell.

Claim. The combination of the barrels *a* and chamber A, in the manner and for the purpose herein set forth, and constructed substantially as herein described.

No. 11,902.—George Miller.—*Improved Manufacture of Round Banding.*—Patented November 7, 1854.

Figure 1 denotes a transverse section of a piece of leather or other suitable material, in the form in which it is to be made previous to its being converted into a round band of my improved kind. Figure 2 exhibits a transverse section of such a band, and indicates the manner in which the strip is rolled up and cemented together.

Claim.—The improved manufacture of round banding, as made substantially as described; that is to say, by reducing a strip of leather or other suitable material to the shape denoted in figure 1, and subsequently rolling and cementing it together into that essentially as exhibited in figure 2.

No. 11,903.—Edmund Morris.—*Slate Frames.*—Patented November 7, 1854.

The frame A B is of a single piece, and is so cut by a circular saw. A groove to admit the slate is cut by passing the frame against a circular saw, which cuts through both ends *a b*, and is just of the width to leave a proper groove in each side to admit the slate through the ends. The piece C is then fitted in at each end, and completes the frame.

No. 11,904.—MARCUS P. NORTON.—*Improvement in Railroad-Car Brakes.* Patented November 7, 1854.

The object of this improvement is, to apply to a brake having double rubbers clasping the sides of each wheel—a mechanical arrangement, whereby the said rubbers shall always be ready to act upon the forward and descending part of the wheel, in whichever direction the train may be moving, so as to avoid the lifting tendency which would result from the reversed position of the brakes.

Claim.—What I claim as my invention is, the arrangement of machinery above described by which the action of the rubber or rubbers is confined to that part of the car-wheel which, as the car is moving, is forward and moving downward, and, when the direction of the car is reversed, brings another rubber or set of rubbers to act upon the other side of the wheel, which is then in like manner forward and moving downward.

No. 11,905.—DEWEY PHILLIPS.—*Farm Gates.*—Patented November 7, 1854.

The inventor combines with the gate frame an adjustable sliding lever L, which, by being confined as regards *vertical* motion at *x* and *j*, (but free to move longitudinally,) serves as a support to the gate. The gate and lever move on friction rollers; and by inspecting the figure, it will be seen that the *thrust* due to weight of gate is transferred from the post *n* to the auxiliary post *o*, thereby preventing all liability to *sag*, or change of position of posts.

No. 11,906.—WILLIAM E. RIDER and JOHN MURPHY.—*Improvement in Sulphurizing Gutta Percha and like Gums.*—Patented November 7, 1854.

The improvement consists in the removal of superfluous sulphur from India rubber or gutta percha, when it has been vulcanized or is in the act of being vulcanized, by filling the vulcanizing oven with hydrogen gas during the heating process, called the curing, and allowing the gas to escape as fast as it becomes neutralized; by which, as the inventor alleges, the after accumulation of sulphur upon the surface of said gums is prevented, and consequently the necessity of boiling them in caustic alkali entirely avoided.

Claim.—The claim covers the whole ground, substantially as set forth. No illustration.

No. 11,907.—E. W. ROFF.—*Machine for Tenoning Blind Slats.*—Patented November 9, 1854.

Claim.—The employment of the gauge I, applied to an adjustable frame H, for the purpose of cutting the tenons of equal length.

The frame H being adjusted to or from the cutter-head D, to suit any required length of slat, and the guage I being set so that its stop *i* shall be a tenon's length from stop *j*, the slat *l* is placed on the rest F;

then by pushing the sliding gauge I until its *i* abuts against the stop *j*, the tenon will be cut by the revolving cutter D; the spring *k* draws the gauge I back as soon as pressure is released.

No. 11,908.—CHARLES RUMLEY.—*Improvement in Steam-Engine Valves.* Patented November 7, 1854.

Claim.—The combination of the compound valve-seat, consisting of an adjustable segment I and a self-adjusting segment J, with a rotating wing-valve K revolving isochronally with the piston, substantially as herein described.

No. 11,909.—CHARLES RUMLEY.—*Improvement in Rotary Steam-Engines.*—Patented November 7, 1854.

This improvement will be best understood from the claim allowed, which is to making the internal curvature of the cylinder to coincide with those portions of the lines of two or three intersecting circles of equal radius, and described from centres X, X^1, X^2, occupying the relative positions herein described, which are exterior to the points of intersection, whereby the construction of an elliptical cylinder is greatly simplified, so that it may be bored with precision with an ordinary boring-engine.

No. 11,910.—ISAAC SEARLES.—*Improvement in Machine for Hat-Bodies.* Patented November 7, 1854.

Claim.—The brush-feeding roll B, in combination with the metallic bar Z; also, the use of two or more pickers, when used to throw the fur on all sides of one and the same cone or wire-gauge for the purpose of laying the fibres of fur in all directions, without depending on the rotary motion of the cone to equalize the thickness.

No. 11,911.—ROBERT M. SELLECK.—*Improvement in Harness Saddles.* Patented November 7, 1854.

Claim.—The depressions B B formed on each side of the head of the cast-iron saddle-tree, in combination with the gullet-piece G, the tongue of the gullet-piece serving as a tack-hold, substantially as and for the purposes described. Also, providing the flaps L L with tongues M M, which pass under the lower part of the frame while the flaps pass on the top of the same, substantially as and for the purposes described. Also, making the false seat of tin and separate from the cantle, substantially as and for the purposes set forth.

No. 11,912.—JAMES SLATER.—*Circular Saw.*—Patented November 7, 1854.

The saw-plate is scolloped at opposite joints, leaving two opposite toothed segments. The object of thus forming the saw is to avoid the

bad effects produced by the irregularities of motion due to "dead-centres." It may be seen that the saw does not cut while the engine is upon its centres.

No. 11,913.—JEREMIAH P. SMITH.—*Improvements in Corn-Shellers.* Patented November 7, 1854.

In this machine the ears of corn are fed from hopper *u* upon the left end of toothed-cylinder *a*, and roll against the plain shelling-bar *g*, which is pressed towards the cylinder by a coiled spring *o*. The remaining shelling-bars *g g* have hinges *h h* and springs *i i*, (and all have guides *n* and frames *m*,) so that the ears of corn readily pass from the feeding end of the cylinder towards the right from one shelling-bar to another, and the large or small ears (and either end foremost) are constantly held against the cylinder. Small rests *j j* support the feeding-bars *g g*. A feed agitator *q s* is worked by a crank *v* and bell-crank *t*.

Claim.—I do not claim a concave cylinder, as the same has been in use before, nor the coiled springs *o o* and guides *n n*; but I claim—

1st. The jointed shelling-bars *g g*, having rests *j j* and springs *i i*, in combination with coiled springs *m m* and guides *n n*.

2d. I also claim the vibrating-feeder, operating substantially as set forth.

No. 11,914.—B. H. WASHINGTON.—*Improvement in Blast Furnaces.*—Patented November 7, 1854.

The two funnels D E, connected at their apex, are inserted in the casing of the furnaces underneath the fire-grate B, one of the funnels being within the casing and the other without. If the aperture *b* is not provided with the funnel E, the blast enters in the direction of the dotted lines in figure 2, and an eddy is formed around *b*. This, and the friction occasioned by it, is to be avoided by the application of the air-guiding funnel E. The inner funnel D is to serve a similar purpose, in guiding the air from *b* towards the grate.

Claim.—The employment or the use of the two hollow cones or funnels D E, for the purpose as herein shown; said cones or funnels being applied as described, or in any other way to produce the desired effect.

No. 11,915.—E. WEBBER.—*Machine for forming the Opening in the Heads of Shovel-Handles.*—Patented November 7, 1854.

The piece J is clamped in the revolving rim T by any convenient device, and the spindles T S, carrying the cutters B B^1, are caused to approach by hand-levers *b b*, and thus penetrate through the head, forming the *eye* of the handle. To give the eye its peculiar shape, a slight longitudinal reciprocating movement is intermittently imparted to the carriages G G, by cams E, and the spindles which take against the carriage at proper intervals, thus causing the cutters to form the oblong shape of the eye; the weights W move the carriage of the spindles, in

combination with the cams. One half of figure 2 represents a section, and the other half a side-view of the machine.

Claim.—The mechanical combinations to produce this compound motion.

No. 11,916.—CHARLES WILSON.—*Improvement in Locks.*—Patented November 7, 1854.

Claim.—The combination of the series of opposite tumblers *t t*, &c., attached to and moving with the bolt, substantially as set forth.

No. 11,917.—WENDELL WRIGHT.—*Repeating-Pistol.*—Patented November 7, 1854.

Claim.—1st. The employment or use of the thumb-trigger F, arranged and connected with the cocking-trigger K, substantially as shown, so that the trigger F may be operated by the thumb while the trigger K is operated by the hand.

2d. Countersinking the end of the stop M, which locks or retains the cylinder D as each chamber is fired, for the purpose of enabling said stop to enter the chambers when the cartridge, or powder and balls, are within them.

3d. The flexible pin *l*, at the end of the hammer F, whereby the pin is enabled to adjust itself to the vents *c* of the chambers *b*, and thus insure the ignition of the pills as set forth.

4th. The nipple-boss E at the side of the cylinder D, when said boss is inserted within a cavity *f* in the cheek-piece, and encompassed by a fire-ring *g*, for the purpose of preventing the explosion of more than a single chamber at once, or at one operation of the trigger K.

No. 11,918.—S. M. YEAMAN.—*Improvement in Straw-Cutters.*—Patented November 7, 1854.

In this machine the V-shaped knives *a* and *b* are attached to sliding-frames *c* and *d*, which slide in grooved posts, being held in place by guides *l l*. Lever *i* is pivoted to the centre of frame *c*, and works upon the swinging or vibrating fulcrum *k*, of which the lower end is pivoted to the one post of the machine. Lever *g* is pivoted at the centre to frame *d*, and has a vibrating fulcrum *f* at one end, whilst the other end is connected to lever *i* by link or rod *h*. By this arrangement, if the lever *i* in working the frames be pressed backward against frame *c*, the action of link *h* is intended to draw frame *d* forward, so that the V-shaped knives will have their edges brought together with a closer shear-cut, in order to prevent the knives from sliding upon the straw, in case the frames, by wear, fail to press the knife edges together.

Claim.—I do not, therefore, claim the knives, nor the sliding-frames, nor the system of levers, nor the gauge-board, separate and in detail considered; but what I claim is my method of arranging the operating parts of a straw-cutting machine, for the purpose of making it, by the

pressure exercised during the operation on the driving lever, work close and be effective; when otherwise arranged, from working loose, it would choke or not cut at all.

No. 11,919.—SAMUEL T. THOMAS and ELIZA ANN EVERETT, administratrix of EDWARD EVERETT, deceased.—*Improvement in Loom-Beams.* Patented November 7, 1854.

Claim.—Forming the loom-beam of sectional parts or beam a, a^1, a^2, which, when arranged side by side on a shaft b, form the entire loom-beam, ready for insertion in the loom, by which arrangement the length of the loom-beam may be varied and a variety in the stripes produced, by simply varying the relative positions of the sectional loom-beams in the loom, as set forth.

No. 11,920.—JOHN JENKINS, assignor to ROE, HORTON, & Co.—*Improvement in Lifting-Jacks.*—Patented November 7, 1854.

Claim.—The arrangement of axle-rest or seat H, substantially as and for the purpose described.

No. 11,921.—JOHN P. AVERY, assignor to JOSEPH B. BROMLEY.—*Improvement in Machines for Cutting and Dressing Stone.*—Patented November 7, 1854.

The letters *a a* represent the rails upon which the platform *b* is moved, one of which is tongued for a groove in the wheel *c* to guide the platform; *d b* are brackets, by means of which the slab *e* is secured firmly to the platform *b* by the perpendicular screw 3, and moved towards or from the plate *f*, by means of the screws 2. The slab or block is thus secured to the platform, on a line with revolving face-plate *f*, fastened to which by means of screws are the revolving conical cutters or endless picks, the gritters, or the polisher. *g* is the cutter, *h* the gritter, and *i* the polisher; *j k l* are the clamps, washers, and nuts, for securing the stone to the platform *b*.

Claim.—The combination and arrangement herein specified, with the revolving face-plate or its equivalent, of the rotating taper or conical picks or cutters *g*, operating throughout their length on the stone, to face it, with a velocity or movement on their axis proportioned to the varied velocity given them on the revolving face-plate, which carries and drives them substantially as specified, and whereby the advantages herein set forth are obtained.

No. 11,922.—EDWIN ALLEN.—*Improvement in Machinery for Carving Stone.*—Patented November 7, 1854.

The nature of this improvement is set forth in the claim, by reference to the annexed figure. (N is the tool-shaft.)

Claim —The employment, for the purpose of carving stone and other substances, of two pantographs, combined with a tracer U and cutting-

tool as described, to wit: the pantographs being arranged at right-anles to each other, and having their main pivots connected or arranged in such way as to form or be equivalent to an universal joint, and the tool and tracer being suspended from or attached to the pantograph O P Q R, and passing through sockets in the legs of the pantograph A B C D, whereby the tracer and tool are allowed a universal movement, as set forth.

No. 11,923.—Levi B. Ball.—*Improvement in Smut Machines.*—Patented November 14, 1854.

The improvement consists in employing in the concave of smut machines, wood or iron slats, or any other hard and soft slats, arranged alternately at right-angles with the back of the fan-wings revolving within, in order to make said slats self-sharpening, the edge of wood or softer substance wearing down below the edge of iron, or the harder substance, and thus forming an appropriate scouring surface.

Claim.—The use or employment of the described slats, or equivalents.

No. 11, 924.—Wm. Bancroft.—*Improvement in Cultivators.*—Patented November 14, 1854.

In the cultivator the standard *c* is raised or lowered by screw *d*, to regulate the depth of working standards *f* and *g*, which are hinged to the beam *a*, to allow the above mentioned movement of *c*, carrying the point of a V-shaped knife *d*.

Claim.—I am aware that a triangular knife like mine has been used; but what I claim is the method of making the knife adjustable upon the frame *a*, by means of standard *c* and hinged standards *f* and *g*, as set forth.

No. 11,925.—Henry Bates.—*Improvement in Slide-Valves.*—Patented November 14, 1854.

The improvement consists in the employment, in combination with the usual slide-valve, of a supplemental exhaust slide-valve C, to be operated by separate mechanism to work over a separate series of ports, which are similarly arranged to, and communicate with, the same passages as the usual ports, for the purpose of giving a free exhaust till the termination of the stroke of the piston, and for enlarging the area of passage for the exhaust. In figure 1, the top view of the valves indicated by dotted lines.

No. 11,926.—William Beebe.—*Improvement in Double Cylinder Boilers.*—Patented November 14, 1854.

The pressure on the water flowing through the mains from public works for supplying cities, diminishes so rapidly towards the close of day that it is difficult, without a force-pump, to fill a reservoir located in the upper apartments of a house. The improvement in this case

applies a remedy and heats the water at the same time, when required for bathing and other household purposes.

Claim.—The combination of two boilers, one within the other, and two reservoirs, one above the other, arranged with one set of connections with a kitchen-range, so that the upper part of a house may be supplied with hot water by means of the upper reservoir, which will derive its supply of cold water either from the roof or from a force-pump; while the lower part of the house will be supplied by means of the lower reservoir, which will derive its supply from the public water-works.

No. 11,927.—MARTIN BELL and EDWARD B. ISETT.—*Improvement in Apparatus for making Iron.*—Patented November 14, 1854.

This improvement consists of the series of inclined close deoxidizing tubes or vessels C, built of common fire-brick, and arranged so as to be parallel or nearly so with each other; and inclined at an angle of about fifty degrees from the horizon, so as to lie or rest their whole length securely upon a substantial inclined base; and also so as to be exposed only on the two opposite outer sides of each tube to the action of the escaping heat from the furnace, as it passes along through the intermediating flues E, the same being combined with the main flue B, through the openings F, and with the interior of the furnace, each one tube having an adjustable cut-off or sliding-gate N at its lower end, as described; and also combined with a separate horizontal way M, leading directly into and connecting the said tubes with the bottom of the reverberatory furnaces, as described.

No. 11,928.—WILLIAM BELL.—*Improvement in Lamp-Caps.*—Patented November 14, 1854.

Claim.—The perforation in the lamp-cap, in combination with the short chamber of perforated tin, wire gauze, or other analogous contrivance, by which means the lamp may be filled without removing the cap, and the spirit within the lamp may be protected from igniting when the lamp is filled, without the use of the double cylinder of wire-gauze, or perforated sheet-metal, as heretofore employed.

No. 11,929.—JOB BROWN.—*Improvement in Cultivator.*—Patented November 14, 1854.

The invention in this cultivator consists in making the pieces a a^1 serve as handles, beam, and tongue; the forward-ends being united, the standards e e^1 are adjustable in relation to each other upon the beams a a^1 and cross-bar c, so as to cultivate nearer or more distant from the rows of plants. This cultivator strides two hills, cultivating both sides of each, whilst short standards h h^1 turn the leaning stalks into the rows.

Claim.—The combination of the angular-shaped frame a a^1 (having the two pieces a and a^1 united at their forward ends into a tongue,)

with the long standards d d^1, e e^1, and short standard h h^1, in the manner and for the purpose herein set forth.

No. 11,930.—THOMAS M. CHAPMAN.—*Device for Adjusting Mill-Saws in their Frames.*—Patented November 14, 1854.

This enables the operator to adjust or take out and replace the saw quickly and accurately, by means of two stocks D D, secured to the gate A, the one to the upper cross-bars C, (represented in the drawing,) and the other to the lower cross-bar, and four stops F on each side of each end of the saw.

Claim.—The combination of these stops and stocks with the saw and its frame.

No. 11,931.—MATTHIAS P. COONS.—*Improved Multigrade Iron Fence.*—Patented November 14, 1854.

Claim.—The devices as represented in the drawing. Figures 1 and 2 represent a view of one of the posts, in which a^1 indicates the pin by which the cap is secured; y y are pins on the coupling-plate B to secure it to the post; C represents the pickets; m the collar that fits against the post A, and also against the picket C; and E is the sleeve which is fitted between the collars and pickets. Figure 4 a vertical section of the picket marked P, showing in black lines the shape of the mortise, and in dotted lines the positions in which the bar B may be placed. The combination of the collar m and sleeve E with the peculiar form of mortise in the section P of the picket, constitutes the entire claim.

No. 11,932.—HORACE I. CRANDALL.—*Mode of Holding Vessels by the Keel, in Sectional Dry and Floating Docks.*—Patented November 14, 1854.

This invention consists in the following arrangement: pins D are inserted into tubes A, which are pivoted at B on each side of the keel-block K; said tubes are kept in a horizontal position by the spring-catch J, till the vessel is floated over and rests upon the keel-block, when, by a pull of the cord J, said tubes, which have weights C attached to them, assume their perpendicular position on each side of the keel.

Claim.—The manner of arranging the materials for the purpose of holding vessels by the keel, &c.

No. 11,933.—GEORGE COMPTON.—*Improvement in Looms.*—Patented November 14, 1854.

Claim.—Arranging two or more patterns upon a single chain E, so that by bringing the rods of the chain in a certain order, one pattern is produced; and by operating them in a different order, another pattern is

produced in the manner described. Also, placing two or more patterns upon the rods of the pattern-chains, side by side, and operating them in succession, by vibrating the chain laterally in the manner described. Also, pivoting the lifting and depressing rods G P at one end, the other end being adjustable, in the manner and for the purpose set forth.

No. 11,934.—DANIEL HARRIS, assignor to JOHN P. BOWKER, Jr.—*Improvement in Sewing Machines.*—Patented November 14, 1854.

The nature of this invention consists in a simple and effective method of drawing up the slack of the needle-thread as the stitch is tightened up, and holding it until the eye of the needle enters the cloth, when it is left free and loose until the shuttle has passed through, and the needle-bar again rises to tighten up another stitch.

In the drawing, *a* is the tightener, or device which tightens the stitch and holds up the slack thread; *c* is a slot in the arm, in which moves a pin *d*, projecting from the needle-bar D. This slot is so formed that the arm *a* is held by the pin *d* during the upward motion of the needle, until the latter, on descending, has entered the cloth. The pin then strikes upon the inclined portion of the slot, and the arm is thrown into the position represented in figure 2.

Claim.—So arranging the bent arm *a*, that by its movement it shall perform the triple operation of slacking up the thread as the needle is about penetrating the cloth, and admit of the necessary pause whilst the shuttle passes through the loop, and then tighten the stitch in advance of the upward motion of the needle-bar, and draw from the spool the requisite amount of thread for the next stitch.

No. 11,935.—JONATHAN HIBBS.—*Improvement in Ploughs.*—Patented November 14, 1854.

This invention consists in placing a toothed roller *a* on each side of the coulter; one of said rollers extending back beyond the standard of the plough, and being driven by a band which passes over a pulley upon driving-wheel *c*, also turns the other roller by means of cog-wheels *d d*, for the purpose of cleaning the coulter of grass or weeds. The inventor is aware that a rocking-shaft has been employed, its teeth being made to vibrate in front of the coulter by the hand of the ploughman.

Claim.—Combining with a plough the revolving weed-clearing rollers, armed with teeth or spikes, said rollers being operated automatically by a wheel attached to the back part of the plough; in the manner and for the purpose substantially as described herein.

No. 11,936.—GEORGE HODGKINSON.—*Machine for Paging Books.*—Patented November 14, 1854.

Claim.—1st. The construction and combination, substantially as described, of the pair of taking-up wheels *i*, weighted double-acting

tension-cord *m*, and type-bearer *f w x*, in combination with the square shaft and trigger, and actuating piston or equivalent devices for the proper tension and delivery of the type-bearer *f w x*, during the ultimate advancement and depression of the type.

2d. The series of type-blocks, constructed and arranged as described, and consisting each in succession of the consecutive odd number, coupled with the even number, three units higher in the scale; in combination with an extended platen *e*, and its accessories *v*, *y*, *z*, 1, or equivalent devices, substantially as described, so as to act at each stroke upon the further pages of two consecutive leaves of an unfolded or open book.

3d. The mode herein described and represented of clamping the type-blocks to the band by means of a sheet-metal sheath *x*, enclosing the rear side and edges of the type and type-holders.

No. 11,937.—GEORGE T. LEACH.—*Improvement in the Method of Engaging and Disengaging Self-Acting Car-Brakes.*—Patented November 14, 1854.

The nature of this improvement consists in the arrangement of a longitudinal rock-shaft L, with arms *g g*, playing in slots of the pawl-arms M N, whereby the said arms may be engaged at pleasure on either side of the rack *a b* of the bumper or draught-bar K, and thus be made to operate the brake either by compression of the bumper or by the traction of the draught-bar, and whether the cars be moving forward or backward, as desired.

Claim.—I do not claim operating the brakes by means of the back movement of the bunter-slide; but what I do claim, is the combination of the two jointed pawl-levers M N, the rock-shaft L and its lever workers *e f*, and the two racks *a b*, as arranged and applied to the bunter-bar K and the brakes, and made to operate substantially as specified.

No. 11,938.—FRANCIS MATON.—*Breech-Loading Gun.*—Patented November 14, 1854.

Claim.—The combination of a sliding breech-piece B, having a semi-spherical socket, and a partially rotating motion whilst closing on the end of the barrel, with a fixed barrel, having a corresponding semi-spherical end, the two forming a cup and ball joint, whereby the powder is brought nearer to the point at which the cap is exploded, a more certain ignition attained, and the joint between the breech-piece and the barrel more effectually closed, substantially as described.

Also, the employment, for the front sight A of a fire-arm, of a needle-wire, or its equivalent, having a bulge or enlargement at or near its middle, which is in a horizontal position when the arm is levelled for firing, as described. Figure 3 is a top view, the handle of the breech-piece being turned in a horizontal position, and the breech-piece itself being slid forward.

No. 11,939.—WILLIAM MORRIS.—*Improvement in Omnibus Registers.*—Patented November 14, 1854.

A particular description of this machine would occupy more room than can be assigned it in this Report. The claim, in connexion with the figure, sufficiently shows the device patented.

Claim.—Having thus fully described my invention, and the manner of operating the same, I wish it to be understood that I do not claim the exclusive use of a spring-notched pawl, and gauging with the driving-wheel; but what I do claim as new is, forming a notch *s* near the end of the bell-hammer bar *c*, next the toothed-wheel K, so as to cause the same to act as a double-pawl or stop on the teeth of said wheel, and to prevent a recoil of the same, when the spring-bolt D and cog I have not been drawn sufficiently high to strike the bell and record a fare, and the consequent striking of the bell by the pawl-end of the bar *c* being allowed to move quickly upward upon said recoil, substantially as herein set forth.

No. 11,940.—JOSEPH MILLER.—*Improvement in Railroad-Car Coupling.* Patented November 14, 1854.

Claim.—I do not claim the hooks, as they have been used before; but what I claim as new, and of my own invention, is the combination of the horizontally-acting hook C with the vertically-moving box B, constructed and operated as hereinbefore seth forth.

No. 11,941.—WILLIAM MOORE.—*Improvement in Grain Winnowers.*—Patented November 14, 1854.

The improvement and claim consist in the arrangement of riddles I I around a perpendicular fan *e*, so that grain can pass over each and be acted upon at every desired point by wind from said fans, as represented.

No. 11,942.—ALPHEUS MYERS.—*Tape-worm Trap.*—Patented November 14, 1854.

This trap is made of gold, and is shown set at figure 1, the length being less than an inch, and the diameter ¼ inch. The separate parts, figure 2, are united by inserting spring *g* into cup *a*, and following the former by cup *d* and by cup *b*, which is held upon cup *a* by a bayonet-fastening. In setting the trap, stud *f* catches upon the top of cup *d*. Bait being placed in cup *b*, the trap is set and swallowed, after the patient has fasted several days, one end of cord *h* being returned from the mouth. The worm in reaching the bait through opening *c*, pushes cup *d* from stud *f*, when spring *g* forces upward cup *d*, whose teeth seize the worm, when both the trap and worm may be withdrawn together. In this manner the inventor asserts that he has operated successfully.

Claim.—A trap for the removal of tape-worms from the stomach and intestines, constructed and operating substantially as herein described.

No. 11,943.—ALPHEUS MYERS.—*Operation for Removing Tape-worm from the Stomach.*—Patented November 14, 1854.

This operation consists in making the patient swallow a trap after two to six days fasting, and then leaving him at rest until the worm is caught, when both trap and worm are gently withdrawn. If the worm be not caught in twelve hours, the trap must be inspected and again baited. (See patent No. 11,942 of this report.)

Claim.—The process herein described of removing tape or other worms from the stomach or intestines, by means of a trap which is baited and swallowed by the patient, and is caused to capture them by the seizure of the bait. No illustration.

No. 11,944.—C. B. NORMAND.—*Method of Controlling Logs in Saw-Mills without a Carriage.*—Patented November 14, 1854. Patented in England October 27, 1852; in France November 5, 1852.

Claim.—The method of controlling and guiding logs in saw-mills by means of a longitudinal bar *f*, the lower edge of which is made sharp to induct the prominent parts of the log parallel to the sawing, the said bar being made movable vertically to admit any sized log beneath it.

Also, in combination with said bar, the employment of a like bar *d*, on which the log rests and moves.

No. 11,945.—C. B. NORMAND.—*Improved Method of Hanging Saws.*—Patented November 14, 1854.

The first part of this invention relates to the method of hanging the saw-gates, with the view to give to the saws a motion similar to that imparted by hand. The first clause of his claim explains this, viz:

"Connecting the saw-gate with the outer ends of two vibrating beams *e e*; but this I claim only when the said beams diverge from each other from their axes of vibration to their junction with the saw-gate.

"2d. Placing and running the saw-gate horizontally, in combination with placing the carriage with its transverse plane parallel with and below the saws, and passing through the saw-gate." The remaining clause covers supporting the rollers *i i*, composing the bed for the log, in bearings having heights so as to adapt the bed to logs of curvature.

No. 11,946.—C. B. NORMAND.—*Improved Method of Controlling the Log for Curved and Bevel Sawing.*—Patented November 14, 1854. Patented in England October 27, 1852, and in France November 5, 1852.

This invention is designed more especially for sawing ship-timber to the various bevels and curvatures required, and consists in mechanism

to support and direct the log to the saws in the line of the cut. This is accomplished by an operator during sawing, as follows:

Figure 1. The couplets of rollers $j\ j^1\ j^2\ j^3$ are hung in frames $h\ h^1\ h^2\ h^3$, which are attached to a beam $f\ f$, which turns about bearings $d\ d$ in journals $c\ c$. These rollers $j\ j^1\ j^2\ j^3$ have slight flanges around them at intervals, which take hold of the log. The log is fed over these rollers by two other serrated rollers, beneath the two rollers $j^1\ j^2$. A rod k connects these sets of rollers, so that, by moving the handle r, the axes of the rollers will converge to a common centre. It is plain that, if a log be forced over these rollers, its direction may be governed by moving the handle r at pleasure. This determines the *curve* required. To give the bevel, this entire arrangement is inclined at pleasure by the screw and its attachments, seen in figure 3.

Claim.—"The mode of operation, substantially as specified, for directing the log or timber to the saw or saws, in curvelinear sawing, by means of rollers or their equivalents, whose axes can be shifted at pleasure, as herein specified, to determine and vary the line of motion of the log or timber to the saw or saws, without the necessity of turning or moving the saw or saws laterally, substantially as described."

Also, "mounting the rollers which support the log or timber to be sawed in a swing or vibrating frame, or the equivalent therefor, substantially as specified, so that the plane, tangent to the upper edges of the rollers, can be placed at any desired angle with the plane of motion of the saw, and there retained, or gradually shifted in either direction during the sawing operation, whereby the log or timber can be sawed to any fixed and determined bevel, or to any bevel varying in any desired degree, as set forth."

No. 11,947.—Julius A. Pease.—*Improvement in Overshoes.*—Patented November 14, 1854.

The claim explains the character of this invention, by reference to the accompanying figure. A represents the ribs, and B the depressions between them.

Claim.—Making India rubber or gum shoes with the inner surface ribbed, corrugated, or otherwise made uneven, for the purpose of allowing a circulation of air between it and the boot or shoe over which it is worn; and this, whether it be effected in the precise manner stated, or by lining the shoe with a similar ribbed, corrugated, or otherwise raised and depressed surfaced fabric, as described.

No. 11,948.—Charles A. Robbins.—*Ditching-Plough and Excavator.* Patented November 14, 1854.

This invention consists in the application of a cutter to a ditching-plough, and is explained in the following claim:

Claim.—The employment or use of the vertical reciprocating cutter C, arranged substantially as shown, for the purpose of cutting the earth into sods, or pieces, for the purpose of rendering the earth easy of removal either by hand or by endless aprons.

No. 11,949.—GEORGE D. STILLSON.—*Excavating Machine.*—Patented November 14, 1854.

The nature of this invention consists in controlling the cutting or scraping edges H of the excavator, so as to keep it always at or about the same relative position in regard to the earth to be removed, and yet be raised or lowered to ease said cutting-edge, when too powerfully resisted, and thus materially aid the scraper in entering and passing through the earth, which is to be raised up to it.

Also, in so hanging the scraper to the frame or axle which supports it, by means of pivoted radial arms E or braces, as that said scraper, with the earth thereon, may, by a hand-wheel or other equivalent device, be first raised up horizontally, or nearly so, a sufficient distance to suspend it on the wheels by which it is to be drawn away, and, by continuing to raise it by the same means, may be dumped and tilted.

Also, in attaching the scraper to the wheel-truck, or frame, by rigid arms D D, so as to employ the entire weight of the carriage and load upon it in holding the scraper to its work.

Also, in the use of a breaker J, placed at or near the front of the scraper, for the purpose of loosening up the earth and facilitating its progress to the rear of the scraper, and to prevent packing or clogging in front of the scraper.

Claim.—Substantially the same as above.

No. 11,950.—WILLIAM STODDARD.—*Shingle Machine.*—Patented November 14, 1854.

Claim.—1st. The combination of the riving-knife F with its cap-piece *e*, arranged, etc., and operated as described. The cap-piece prevents the block from dropping down upon the bed, so that the back of the riving-knife, on its backward motion, would strike against it.

2d. The spring-stop *g h*.

3d. The clamp *k k*, which seizes the shingle when the driver cease to act, and draws it through, and throws it clear of the machine. This clamp is moved by the rocking-lever *l*. The remaining devices are common in other machines, and the drawings sufficiently explain their construction and connection.

No. 11,951.—JACOB SWARTZ.—*Improvement in Grain and Grass Harvesters.*—Patented November 14, 1854.

The improvements refer to the combination of devices for obtaining an accelerated motion of the cutter-bar, and to the hinging of the guard-tooth bar U to the frame in such manner as that it may be adjusted vertically when cutting grain, and follow by i s own weight the undulations of the ground when cutting grass, and be self-adjusting independently of the supporting or carrying wheel as it passes along; also, to the manner of supporting the frame of the machine upon the axle of the main carrying and driving wheel, so that it may at pleasure be held in or out of gear with the pinion, as the machine may be

working or being moved from place to place preparatory to its being put in operation.

Claim.—1st. The application to the driving or vibrating of the cutter-bar of crank E, pitman *m*, toggle-levers *j j*, hinged lever P^1, and rod N, for the purpose of giving four reciprocating motions to the cutter-bar U for every revolution of the crank-shaft *c*, substantially as described.

2d. So bringing the cutter-bar U to the machine, by means of the hinged pieces O^1 and Q, as that it may rise and fall in parallel lines, whether used for cutting grain or grass, substantially as described.

No. 11,952.—Benjamin James Tayman.—*Improvement in Machinery for Stretching and Drying Cloth.*—Patented November 14, 1854.

Claim.—The means of stretching the cloth while wet, and carrying the same parallel while being dried, consisting of the endless belts of tenter-hooks D, travelling on adjustable guides or ways H, to accommodate different widths of cloth; which ways are parallel to each other except at the ends, where they converge to allow the cloth to be hooked on and stretched as it is moved forward.

Also, the application of sponge-rollers P P and fan-brushes K, in combination with the drying-cylinder A, to hasten the process of drying.

No. 11,953.—Orson Westgate.—*Saw-Gauge.*—Patented November 14, 1854.

The gauge-plate L is moved parallel to itself, and to any required position, by means of the pinioned-rod C, attached to the gauge and racks F F. The spring R R operates two levers fulcrumed at *o o*, or a brake upon two wheels H H, on the ends of pinion-rod, thus retaining the gauge in any position to which it may be moved.

Claim.—The combination of this brake with the above-mentioned devices.

No. 11,954.—Leon Jarosson.—*Improvements in Method of Constructing Printing-blocks.*—Patented November 14, 1854.

The invention here claimed is cutting several parts of the design of the printing-block, or the design and ground, the one out of the other, from a plate or sheet of prepared felt, wood, or other suitable substance, of the thickness of the required relief; and then securing the parts to the surface of blocks by means of cement, glue, or other suitable means, whereby the cost is reduced, as by the one act of cutting, two printing surfaces are produced, to print with different colors, and an exact fit of the several blocks is insured.

No. 11,955.—GEORGE BRUCE.—*Improvements in Casting Type.*—Patented November 14, 1854.

This invention consists in applying a blast to cool the type-mould H, by means of the tube E, in the operation of casting.

No. 11,956.—GEORGE CROMPTON and MERRILL A. FURBUSH.—*Improvement in the Rollers of Pattern Chains for Looms.*—Patented November 14, 1854.

This invention consists in arranging the rollers upon a previously-formed wrought-iron tube, which is made of the exact length necessary to bring the rollers, when strung upon the rods, into the required positions.

Claims.—The improvement in pattern-chain rollers, a wrought-iron tube *a* being used for the bearing of the roller, the body of the roller C being secured thereto by casting, in the manner set forth; whereby the rollers, when strung upon the chain, are caused to fall in the exact positions required to operate the hooked jacks, without the necessity of gauging and turning down the roller, as has heretofore been done.

No. 11,957.—JONATHAN W. CADWELL.—*Improvement in Draw-Irons for Tow-Lines of Boats.*—Patented November 14, 1854.

The object of this invention is to provide means of instantaneously disengaging tow-lines when required. Figure 1 represents the apparatus when locked. A pawl upon cord *d* moves the end of the lever *c* out of the notch in the tumblers B, which will then fly open and release the tow-line. A ring *n* is cast upon lever *c*, where it passes beneath the deck of the boat, to prevent the trickling of water down the lever into the hold. Spring *s* causes the lever to resume or retain its original position.

Claim.—The arrangement of the frame A, the tumbler B, the lever *c*, with the ring *n*, and spring *s*, the whole operating for the purpose and in the manner substantially as described.

No. 11,958.—JOHN ABSTERDAM.—*Improvement in the Mode of Lubricating the Cylinders and Bearings of Steam-Engines.*—Patented November 29, 1854.

Claim.—The claim allowed is to placing the lubricating reservoir remote from the boiler, and interposing between the oil and the boiler, water, air, or other substances; which will communicate the pressure from the boiler to the oil, and thus keep the oil from being heated, and yet feeding it to the surface to be lubricated by the pressure from the boiler.

No. 11,959.—CLARK ALVORD.—*Improvement in Brick-Moulds.*—Patented November 21, 1854.

Fig. 1 is a view of the mould in a position to receive the clay. Fig. 2 presents a view of the back boards and followers detached from the mould. Fig. 3 is a view with the side of the mould removed.

Claim.—The application of the discharging-piston to the hand-mould, substantially in the manner and as above set forth and described.

No. 11,960.—HENRY F. BAKER.—*Machine for Papering Walls.*—Patented November 21, 1854.

This invention consists in combining within a frame A, the cylinder G, for holding the roll of paper; the paste cylinder H, with its slide K to govern the delivery of the paste on to the roller D; the roller D covered with some spongy material to receive and convey the paste to the paper N; and the roller F, covered with elastic cloth, for the purpose of pressing the paper close to the wall, notwithstanding any inequalities which may be found on its surface, and thus expelling all the air from between it and the paper.

No. 11,961.—HENRY F. DAVID.—*Improvement in Sauce-Pans.*—Patented November 21, 1854.

Claim.—My improved manner of opening and closing the cover of a sauce-pan, or stew-pan, and of retaining the same in an open position, viz: by means of the combination of said cover with the rod *d*, which passes through the hollow handle of the pan, and is supplied with a spring-catch, substantially as herein set forth.

No. 11,962.—CHARLES G. EVERITT.—*Improvement in Machines for Closing Sheet-Metal Boxes.*—Patented November 21, 1854.

Claim.—1st. The arrangement of the driving-shaft J and upper roller-shaft F, with the adjustable sliding-boxes D, springs H, treadle I, in relation to the lower-shaft B and frame of the machine, for the ready adjustment and adaptation of other roller-heads, and for the putting in and taking out of the articles being made.

2d. The arrangement of the adjustable spring-frame O, with its adjustable friction-roller *m*, and in relation to the rollers C G, for the purpose of guiding and sustaining the metal pieces of various shapes and different widths.

Fig. 2 represents the apparatus when a metal piece *r* is operated upon.

No. 11,963.—JAMES FREELAND.—*Improvement in Valve-Gear.*—Patented November 21, 1854.

Claim.—The employment for the purpose of transmitting motion from the eccentric, or its equivalent, to the slide-valve, of a rock-shaft

A, carrying the eccentric arm B, which is connected with the valve-arm D on the usual valve-shaft C, by means of a connecting lever G, an arc-formed slot I, a rocker F, and links J K, all arranged as described, to give the valve the whole or the greater part of its movement during a comparatively small portion of the revolution of the eccentric or its equivalent.

No. 11,964.—SAMUEL GREENE.—*Improvement in Carding Machines.*—Patented November 21, 1854.

Claim.—The application of the clearer cylinder C and wiper W, as described, by which the impurities of the cotton are taken out and formed into a bat.

No. 11,965.—A. KENDALL.—*Shingle Machine.*—Patented November 21, 1854.

This invention consists in certain arrangements of mechanism usually found in such machines, to carry the rived-piece from the hopper through the knives and jointers, and from the machine. Figure 1 illustrates the essential parts. The pieces are placed in hopper G, and being dropped, one at a time, by suitable arrangements, before the drivers G^2, are forced through the knives L L, which dress the sides. The piece is then driven by a clamp-driver Q between two knives (not seen in drawing) situated at *c*, and jointed. These knives approach or recede to suit the width of the shingle. The finished shingle is thence conveyed clear of the machine by an ordinarily operated endless apron.

Claim.—1st. The combination of the hopper G, slide-catch G^1, slide-rests G^2, spiral-spring I, elliptical-spring K, and driver F^2.

2d. The combination of sliding-key *a*, strap *o*, cross-piece *b*, and spring, to hold the shingle while being squared by fingers V^1.

3d. The levers W W^1, tumblers u^1, fingers V^1, slide X, and spring X^1, for squaring the shingle.

The 4th and 5th clauses are levers, cams, etc., for producing certain automatic movements of minor importance, and refer to various drawings which cannot be given here.

No. 11,966.—JEROME B. KING.—*Improvement in Kettles for Calcining Plaster of Paris.*—Patented November 21, 1854.

The bottom of the kettle fits loosely its body, as shown in the sketch, giving room for expansion and contraction without injury to the whole apparatus, and admitting of easy removal for repairs or other purposes, while the arched form of said bottom admits of a greater pressure, and therefore of a greater quantity of plaster to be calcined at once.

Claim.—The method herein described of fitting a conical or arched bottom to kettles for calcining plaster, so that the same shall be allowed to slide on its bearings as it expands and contracts, for the purposes as specified.

No. 11,967.—GEORGE W. LEE.—*Improvement in Seed-Planters.*—Patented November 21, 1854.

This machine on wheels and an axle, which last carries a cam to work seed-disks M, by means of lever S; G is the hopper, from which the seed is fed by holes *c* in disk M. Bar *a* forms a bottom to holes *c* in disk M. Bar *a* forms a bottom to holes *c* as the latter are filling, and scores *n n* are designed to prevent the seed from rolling from bar *a* (even if the latter be inclined to some extent) until disk M moves forward to sweep off the whole charge of seed at once.

No claim is made to disks having holes, the peculiar form only of holes being novel.

Claim.—The scores *o o*, or their equivalents, at the extremities of the holes *c c* in the disks M, in combination with the gradual narrowing of the holes towards their extremities, so as to save the grain from being cut between the ends of the hole *c* and the edges of the hole *b*, substantially as described.

No. 11,968.—DANIEL B. MARTIN.—*Improvement in Slide-Valves.*—Patented November 21, 1854.

Claim.—The mode of packing balanced slide-valves; the same consisting in the attachment of the packing to the bonnet of the steam-chest; whereby I am enabled to adjust the packing while the engine is in motion.

No. 11,969.—RICHARD L. NELSON.—*Improvement in the mode of Attaching Life-Preservers to Vests.*—Patented November 21, 1854.

The drawing represents an ordinary vest, with an opening C in the lining, for inserting the life-preserver B (see dotted lines in figure). D is the tube for inflating the life-preserver.

Claim.—The method herein described of arranging a removable life-preserver in a vest or other garment, so that it may be worn with or without it, and so that the fastening of the garment shall serve to secure the life-preserver perfectly to the person, substantially as described.

No. 11,970.—MIGHILL NUTTING.—*Improved Arrangement of Pencils for Drawing Machines.*—Patented November 21, 1854.

Claim.—The arrangement claimed consists in supporting a pencil A by a tube B, so that spiral springs D may be made to operate in pressing the pencil downwards, upwards, or both upwards and downwards, when desirable. The apparatus thus arranged may be supported in a movable frame.

No. 11,971.—CHARLES PARHAM.—*Improvement in Sewing Machines.*—Patented November 21, 1854.

Claim.—The shutter carrier and driver A, forming the bearing or seat for the shuttle B during its travel, as well as the guide for it on that

side, coming in contact with the thread loop formed by the needle and freely admitting of the passage of the shuttle through the loop, when the said carrier is arranged and combined for operation, together with the needle and the guide plate C, or its equivalent, on the needle-side of the shuttle, whereby the shuttle is relieved from all friction or rubbing bearing on its thread side of the loop, the thread is prevented from being soiled by lubricating material, and increased freedom of action is given to the shuttle.

No. 11,972.—WILLIAM PERRY.—*Improvement in Spinning Machines.*—Patented November 21, 1854.

Claim.—A movable band or bands, whether made endless or otherwise, of cloth or other material, so constructed that it or they may be traversed upon the bobbin rail M, under the bobbins G G each side, or between the spindles, to graduate the friction under the bobbins, and adjust the drag of the bobbin to suit the yarn being spun upon the frame, as described.

No. 11,973.—JOHN A. ROEBLING.—*Improvement in the Manufacture of Wire Rope.*—Patented November 21, 1854.

A description of the nature and construction of this invention would occupy too much space in the report.

Claim.—Operating the top wagon by the same driving-rope which operates the twisting machines, for the purpose of regulating the advance of the top in proportion to the twist.

Also, the propulsion and operation of the centre-strand counter-twist machine by the same driving-rope which actuates the main-twist machine, for the purpose of insuring a perfect correspondence between the motion of the two machines, and at the same time to insure the proper tension of the centre-strand by keeping it exposed to the action of a freely-suspended weight.

Also, the combination of the two sheaves with the hollow shaft for operating the endless rope, and to operate the main counter-twist machine.

Also, the whole arrangement, as above described, for operating the main counter-twist by means of an endless driving-rope, which is kept under a great tension by a suspension weight, and being at liberty to rise, allows the machine to advance as the strands shorten, and at the same time insures a constant and uniform tension.

Also, the peculiar arrangement for lowering the weight-box without slackening the driving-rope, by the application of a brake, friction-wheel, and check-wire, in connexion with a windlass and spur-gearing, or the mechanical equivalent therefor, and in combination with the sled and transfer sheave P.

No. 11,974.—ELLIOT SAVAGE.—*Improvement in Machinery for Threading Screw-Blanks.*—Patented November 21, 1854.

Claim.—The manner in which the screw-blank rest or carriage is moved, in order to form a conical, or approximately conical, or tapering end to the tail part of the screw-blank, in connexion with a cylindrical body and a helix or screw-thread thereon; such movement consisting in turning the screw-blank with respect to the chaser, and subsequently causing it to descend in a vertical line, as set forth.

No. 11,975.—JOHN LEE STEVENS.—*Improvement in Furnaces.*—Patented November 21, 1854. Date of English patent, October 1, 1852.

This improvement of double fire-bars and the fire-bridge, faced with a plate F, for dividing the current of enflamed gases, is intended to accomplish a greatly increased combustion of fuel, and to a great extent consume the large quantity of smoke arising from the use of bituminous coal, thereby preventing the waste of fuel.

Claim.—1st. Supplying the lower fire-bars C with ignited fuel from the upper bars D, in the manner and for the purpose described.

2d. The combination of the double fire-bars with the plate F, for dividing first, and then uniting, the gases of each, when said fire-bars are fed with fuel through one door, and have a fire-bridge which is common to both, substantially as described.

No. 11,976.—SAMUEL H. T. TILGHMAN.—*Improvement in Inhaling Apparatus.*—Patented November 21, 1854.

This invention consists in an arrangement of a bellows F, in connexion with decoction vessel C and cooler D, for furnishing medicated air to mouth-piece M, in order, by the force of the bellows, to avoid the necessity on the part of a patient of making strong and injurious inspirations. The air escapes from the tube *f*, near the bottom of the vessel C, and, rising through the medical decoction, carries off medicated vapor, which is partially cooled in passing worm *a a a*, in cooler D, and reaches the mouth through C. The separate parts of the apparatus are disclaimed.

Claim.—The combination of worm *a*, tubes *c* and *f*, mouth-piece M, bellows F, and distilling-vessel C, constructed and arranged substantially as set forth, for furnishing medicated air in a comparatively dry state, and assisting the respiration of the patient inhaling it, as hereinbefore specified.

No. 11,977.—WILLIAM H. TOWERS.—*Improvement in Clothes-Clamps.*—Patented November 21, 1854.

Claim.—"Securing clothes or other articles on lines by impinging or pressing them between the line and the grooved end of the clamp or

button, having a block at its centre, through which the line passes out of its usual line, in the manner herein described." It will be perceived that the tension of the line holds the clothes between the line and the ends of the clamp.

No. 11,978.—THOMAS W. TRUSSELL.—*Dressing Mill-Stones.*—Patented November 21, 1854.

The effect of the surface of this mill-stone dress, which differs from that commonly adopted in being quite smooth and with rounded angles, is to crush and grind rather than cut the grain, and more perfectly separates the farinaceous portion from its husk—rendering only one bolting operation necessary, and yielding more flour for the same quantity of grain than by other methods.

Claim.—Rounding off and polishing the feather-edge or sharp cutting ridge-lines of mill-stones, and reducing the burr or granulated face to a smooth surface, in the manner and for the purpose herein set forth.

No. 11,979.—ISAAC VAN BUNSCHOTEN.—*Improvement in Rosin-Oil Lamps.*—Patented November 21, 1854.

By reference to the annexed figure, the claim explains the characters of this improvement.

Claim.—The means herein described of confining a thick solar or argand wick to the metallic wick-holder, by a finely wove wick or covering, for the purposes substantially as specified.

Also, the cone *d*, in combination with the cone *e* and circular-plate 13, around the wick-tube, to check any sudden draught and prevent the same passing to the flame, in the manner and substantially as specified.

No. 11,980.—MILAN WATERBURY.—*Improvement in Seed-Planters.*—Patented November 21, 1854.

The accompanying drawings show the hopper B and seeding-wheel C supported on frame A. As wheel C revolves, the cavities 1, 2, 3, and 4, successively rise through the grain in hopper B, said cavities thus having their shallow part filled with seed as at *i*. When the cavity reaches the position of 2, the seed falls into the deeper part, and is afterward kept from falling out by means of scroll D, (as at 3,) until the cavity reaches the position of 4, when the seed falls to the ground.

Claim.—In combination with the cap or scroll D, the peculiar form of the cells; that is to say, the receiving of the grain into the shallow part of the cell, from whence it gradually shifts into the deeper part thereof, and is kept from falling out of the cells by the cap or scroll, by which means the packing or choking of the grain in the cells is entirely avoided, substantially as described.

No. 11,981.—WILLIAM WATT.—*Improved Process of Rotting Hemp, &c.* Patented November 21, 1854. Patented in England May 22, 1852.

The flax, hemp, or other straw, immediately after being seeded, is exposed in a proper vessel, as exemplified in the drawing, to the action of steam or hot water, of about 150° Fah., from below, and of cold water from above, just sufficient to percolate it with steam, and to cause the condensed vapor to drop down from metal points provided in the covering of the vessel, and through the fibrous material under treatment. The steam draws off, first, the volatile substance; and when this is accomplished, which can be ascertained by the ceasing of a particular odor, the escape-pipe of the steam is closed, when the removal of the extractive matters commences, which are drawn off with the condensing steam, and used for feed for cattle, or in any other way. The fibre, still swollen under the treatment described, is passed through rollers, to accelerate the drying, to displace the epidermis, to crush and flatten the pith or boon, and to split it longitudinally. The whole operation may be completed in 24 hours.

Claim.—The application to flax, straw, and similar vegetable fibrous substances, of a current of steam and hot water, or hot water alone, at a temperature of not less than 150° Fah., substantially as herein described, for the purpose of carrying off the volatile matters of such substances, and dissolving and removing their nitrogenous and other extractive matters in manner hereinbefore described, without the aid of fermentation, acids, or alkalies.

No. 11,982.—JOSEPH G. LOOMIS, assignor to W. A. GARDINER.—*Improvement in Surgical Forceps.*—Patented November 21, 1854.

This forcep is so constructed that one blade can make a partial rotation in relation to the other blade, for the purpose of bringing the convexity of the spoon of one blade into the concavity of the spoon of the other, to facilitate the introduction of the forceps, in operating. At the joint of the forceps-blade, A has a slot, which receives two washers *a a*, held by screws *b b*. In each of the washers *a a* is a semi-cylindrical groove, to embrace the contracted central portion of blade B; and one of the washers has two holes *c c*, to receive corresponding studs upon the others. The stud *d*, upon the blade B, fits the two notches *f f* of the washers, and arrests the rotation of one blade in respect to the other.

Claim.—The improved rotary joint, by means of which the instrument may be introduced with one scoop and blade resting within the others, and the instrument then rotated and opened for operation.

No. 11,983.—THOMAS C. BALL, assignor to NATHANIEL LAMSON.—*Improvement in Scythe-Fastenings.*—Patented November 21, 1854.

In the scythe-fastening the band upon the lower end of the snath has upon its flattened side a curved recess E, into which, by a dove-tailed joint, is fitted an adjustable slide D, having the projections or

fulcra F F. The shank K, being placed between the fulcra, has its upper end pressed backward by eccentric or cam G. This action makes the slide D impinge upon the sides of recess E, and keeps the slide, and consequently the scythe, firmly in place.

Claim.—I do not claim the using of a cam or eccentric for confining a scythe, nor the band and extension-plate attached; but what I do claim as my invention is the slide D, with its fulcrums F F, and its corresponding recess E, in connexion with the leverage of the shank K, substantially as set forth.

No. 11,984.—H. SNOW, assignor to JAS. A. WOODBURY.—*Planing Machine.*—Patented November 21, 1854.

Claim.—Combining the presser-bar H with the rotary cutters, so as to secure the same relative position of the inner (or pressing) edge of the bar and the path of the cutting-edge, in holding and cutting the surface of a board throughout its varying thickness; it may be seen that the bar H is confined, by radial arms F F, at an invariable distance from the shaft of the cutters.

No. 11,985.—STEPHEN WOODWARD, assignor to STEPHEN WOODWARD, JOSEPH P. NELSON, and ALONZO C. CARROLL.—*Improvement in Apparatus for Drying Clothes.*—Patented November 21, 1854.

This apparatus is provided with a rack G and pinion H, by means of which the radial arms D D are elevated or depressed upon the cylindrical post A; the slide C, in which the arms are placed, being arranged so as to rotate upon the post, whether the slide is elevated or depressed.

I am aware that a clothes-dryer has been made with a series of radial arms, applied to and made to turn on the top of a post; I therefore do not claim such; but what I do claim is my improved clothes-dryer, constructed substantially as described, or so as to enable the series of arms not only to rotate on the top of the post, but be elevated and depressed as described, and so as to remove the clothes out of the way of a person, and to carry them into higher atmospheric currents, as explained.

No. 11,986.—ALDEN ADAMS.—*Improvement in Hay and Cotton Presses.* Patented November 21, 1854.

This improvement consists in mounting the rails *h* (upon which the box *d*, containing the material to be pressed, is rolled under the pressing-screw B, and afterwards withdrawn) upon India rubber *s*, and at the same time placing a block X under the position occupied by the box *d*, so that the pressure, instead of being borne by the axles and wheels *i i*, will first depress the rails until the box comes in contact with the block, and then be resisted by the block itself; when the pressure is relieved the India rubber lifts the wheels, and with them the box, from the block, so that it is at liberty to be rolled away.

Claim.—I do not claim the general device of mounting the pressing-

box upon a frame-work and rollers, in order that it may be run under the follower and be withdrawn upon rails; but what I do claim is, the combination of the rails *h*, mounted upon India rubber *s*, or its equivalent, with the block X; and during the rise of the follower, the rails will also rise and lift the frame and pressing-box up from the block, ready to be wheeled away.

No. 11,987.—GOTTLIEB BACKSTEIN.—*Fire-Engine.*—Patented November 28, 1854.

The nature of this invention relates to an arrangement of pulling-levers, chains, cross-heads, piston, and cylinder, for the purpose of applying power horizontally to fire-engines. The drawings are so extended, and the claim being only to arrangement of parts above named, that no further description is deemed necessary here.

No. 11,988.—J. W. COCHRAN.—*Improvement in Quartz-Crushers.*—Patented November 28, 1854. Patented in England November 21, 1853.

These improvements cover devices which enable machinery of this class to be repaired or have its parts restored; also, several adjustments found necessary in working with very heavy balls to avoid breaking various parts, if constructed with too much rigidity.

Claim.—1st. I claim the movable dies or bushings, either with or without the India rubber or other elastic interlining or cushion, in combination with the revolving disk or plate, and balls or shells, substantially as described.

2d. I claim the manner of arranging and stretching the wire-gauze or screen in panels, and securing them to the standards, so as to give a uniform surface to the inner surface of the screen.

3d. I claim the connecting shaft for coupling the driving-shaft with the revolving plate or disk, admitting the revolving plate or disk to vibrate laterally or vertically without affecting the driving-shaft or its bearings, combined and operating substantially as described.

No. 11,989.—JOHN CRAM.——*Improvement in Towel-Stand, or Clothes-Horse.*—Patented November 28, 1854.

The drawing and claim sufficiently illustrate this invention.

Claim.—My specified mode of making a clothes-horse, or, in other words, the combination of hanging-frames A B C C^1 with their jointed connecting-bars D E, and one or more tension-racks G, or tension racks and the upright frame F, or their mechanical equivalents, all jointed together, and made to fold up or to unfold, and be used substantially as hereinbefore specified.

No. 11,990.—A. B. CRAWFORD.—*Improvement in Clover-Hullers.*—Patented November 28, 1854.

The invention is confined to the vibrating shovels d^1 y, arranged in the throat of the feeding-hopper, to aid in feeding in the crude seed and chaff, by pressing alternately upon said seed as it passes through the hopper.

Claim.—The feeding apparatus, substantially as set forth.

No. 11,991.—AUGUSTUS ELIAERS.—*Improvement in Seats for Public Buildings.*—Patented November 28, 1854.

This improvement consists in bringing the back of the chair into a vertical or upright position, as the occupant rises from the seat, by the falling of the tilting-seat *c*, which is pivoted at *d*, and sufficiently weighted in rear of such pivot to cause the downward motion of the seat, and which, while dropping, travels against curved arms *z*, attached to the frame-work of the back.

Claim.—I shall not, and do not, claim to have invented the device of tilting the seat by means of weights, or other mechanical equivalents; because, by recent investigations, I have found this to be quite an old device. It is found in the mechanical arrangement for operating the tilting-leaf of the French writing-desk; which, when not in use, is in a vertical position, making a part of the entire plane front of the desk or secretary, and when in use, is in a horizontal position, for the support of the writing materials and the arms of the writer; its inner edge abutting against a rail in the vertical part of the secretary, in the same manner as the seat rests against the under side of the back of my chair; and this desk-leaf is balanced or hung with weights, and tilted by them, in a manner which is very generally understood. For this reason, I especially disclaim the tilting of the seat by means of weights, &c. But what I claim as my invention, is actuating the back by the dropping of the tilting-seat, so as to bring it into an upright position by means of the curved arms attached to, or forming a part of, the frame-work of the back, and acted upon by the rear-edge of the seat, or a shoulder in the same, as above set forth.

No. 11,992.—FLETCHER FELTER.—*Paddle-Wheel.*—Patented November 28, 1854.

Claim.—The combination of the cranked shafts *e* with the vibrating rods *f*, and cam-shaped tracks *g*, in the wheel-house *a a*, for the purpose of turning the edges of the paddles in the direction of the motion of the wheel during their passage through the air.

No. 11,993.—C. B. GALLAGHER.—*Improvement in Converting Reciprocating into Rotary Motion.*—Patented November 28, 1854.

Claim.—I am aware of the prior invention of Charles A. Watson, for improvements in rotary motion, patented August 1, 1838; and that

the impracticability of the same consists in the great friction caused, and necessary power required to disengage the teeth of his racks from the wheel, (which in mine is obviated,) and the great weight of the frame and two racks, which would be too heavy a strain on the piston at the end of each stroke. In my mode, I only have the one rack attached to the piston-rod, the frame standing still. Finally, I do not claim his invention, or any other of similar character which have been invented prior to my own, but simply my mode of combining the different parts of machinery to effect the desired purpose, as above explained.

What I claim as my invention is the above mode of applying steam-power, caloric, or any other motive-power that may use the straight cylinder, to machinery, in place of the crank, as above explained, reserving the right to vary the construction of the same to suit the different kinds of engines, without changing the principles of invention, as above explained. No illustration.

No. 11,994.—ELIAS A. HIBBARD.—*Improvement in Rotary Cooking-Stoves.*—Patented November 28, 1854.

Claim.—The combining or arranging the reverse manner of draught, the elevating and receding grate, the return flue, the diving and descending flue, the angular plates for burning coal, and the rotary top, in manner, form, and continuity with each other, as set forth.

No. 11,995.—JOSEPH HOLLEN.—*Improvement in Knitting Machines.*—Patented November 28, 1854.

Claim.—The combination of the series of projecting teeth *t t*, &c., with the series of needles d^1, arranged and operating as set forth, for the purpose of regulating the stitches and making them even.

Also, the separator *v*, arranged and operated as described, for holding the thread back out of the way of the stitch.

Also, the thread depressor *d*, arranged and operating as described, in combination with the thrust of the needle.

Also, the vibrating feeder i^1, (fig. 2,) arranged and operating as set forth.

No. 11,996.—WHITTEN E. KIDD.—*Improvement in Dies for Pressing Bonnet Fronts.*—Patented November 28, 1854.

This improvement consists in making the upper of two dies *e c* (between which the strips out of which bonnet-fronts are formed are pressed) with a curved opening *g*, whereby the operator is enabled to grasp the ends of said strip and draw it into the proper curve, whatever be its size.

Claim.—The method, herein described, of constructing the die *e* with the curved opening *g* in its side, for the purpose of enabling the workman to guide and steady the material of which the front is composed, whatever the size of the front may be, substantially as described.

No. 11,997.—DANIEL B. MARTIN.—*Improvements in Steam-Boilers.*—Patented November 28, 1854.

Claim.—The arrangement of the series of tubes E, placed vertically, or nearly so, between an upper D and a lower C, and connecting vertical water-spaces F, when the said lower water-space C is made directly over the fire-chamber, and the draught is returned over said lower space, and among the vertical tubes.

No. 11,998.—A. W. MCDONALD.—*Method of Supplying Tanks of Locomotives with Water.*—Patented November 28, 1854.

The inventor proposes a plan to furnish water to locomotives without stopping the train. The tank is to be air-tight; and being once full, a partial vacuum will remain within it when its water is exhausted. From the side or bottom of the tank *b*, a pipe or hose *a*, supplied with a valve, may be put in connection with a cistern of water *c*, under or on the road; and, as the cars pass, the engineer drops this hose, and the water rises into the tank. He also proposes to lower an inclined trough or plane, at a suitable angle to dip into the pool of water; the velocity of the train will cause the water to ascend thus into the tank.

The claim covers this plan.

No. 11,999.—JORDAN L. MOTT.—*Improvement in Stoves.*—Patented November 28, 1854.

This improvement consists in placing around the bulging part of an oval stove a fender, consisting of a flat ring or rim, which projects horizontally outwards to a sufficient extent to prevent contact with the heated surface.

Claim.—The extended rim, or clothes protector, as described, located or combined with the larger diameters of the fire-chamber, that it may serve as a protection to prevent burning clothes when carelessly passing, as set forth.

No. 12,000.—JAMES NEWMAN.—*Improvement in Manufacture of Metal Rods and Tubes.*—Patented November 28, 1854.

Claim.—The claim allowed is, to producing metallic rods, rails, and bars, having the appearance of solid metal, with a core or centre of sand, sandy, earthy, or other arenaceous material, and of metal tubes, by afterwards boring or drilling out the core or centre, as herein set forth.

No. 12,001.—A. D. PERRY.—*Breech-Loading Fire-arm.*—Patented November 28, 1854.

This invention consists in the peculiar and effectual mode of closing the breech of the gun after the cartridge has been inserted, providing

most effectually against the escape of gas, and the recoil of the breech-piece under the effect of the discharge.

Claim.—The employment of the revolving segmental breech *a*, having its centre of motion below, and in the line of the face of the breech of the barrel, and a central plug *d* to fit the bore of the barrel, so that when the breech-piece and the breech of the barrel are brought together, they shall fit, in the manner and for the purposes set forth.

Also, I claim, in combination with said breech-piece, the levers *g h i*, arranged and operating as set forth.

Also, in combination with said arrangement or system of levers *g h i*, the recess *k* in the stock of the arm, in the manner and for the purposes set forth.

No. 12,002.—E. K. Root.—*Machine for Boring the Chambers in the Revolving Cylinders of Fire-arms.*—Patented November 28, 1854.

Claim.—The claim is based on the construction of the chuck *i* with a circular eccentric plate *j*, having a recess to receive the block of metal to be drilled, and radial sliding-gripes *r*, operated by the conical surface of a screw-ring *s*, to hold the metal in proper centre, while being bored by the instruments arranged in a corresponding tool-carrier *c*, advanced or withdrawn by the levers i^1.

Figure 2 represents detached parts of the machine on an enlarged scale.

No. 12,003.—Daniel H. Shirley.—*Improved Piano-Forte Action.*—Patented November 28, 1854.

In this invention, the back-catch rail *i* turns on a pivot *k*, and carries on its shorter arm, over the pivot, a butt *l*; the block *h* rests loosely on the butt *l*. This invention, as described in the claim, is, "giving the blow to the hammer, and keeping it always in readiness for a blow, by means of the vertical arm *e* and diagonal arm *f*, actuated by the butt *l*, as herein above described."

Also, I claim so arranging the back-catch *m* as to actuate it by the return of the block *h* on the end of the diagonal arm *f*, after each blow, as above set forth.

No. 12,004.—Nathaniel Spence.—*Improvement in Machine for Pressing Bonnet Frames.*—Patented November 28, 1854; antedated November 10, 1854.

In this bonnet-pressing machine, instead of heating the moulds themselves, which often involves the necessity of removing the bonnet that they may be reheated, the lower mould or die E is heated by a heating-iron D, which is placed between it and the table B upon which it is placed, and the upper mould or die F is heated by the heating-irons *c c*, which are supported upon it by the ledge *b*.

Claim.—The arrangement of the metallic die E and counter die F, with their respective heaters D and *c c*, whereby the dies can be re-

moved without disturbing the heaters, or the heaters removed or changed without opening the dies; the whole being arranged and operating substantially as set forth, for pressing and dyeing bonnet-frames, as described.

No. 12,005.—WILLIAM TALBOT.—*Improvement in Looms for Weaving Bags.*—Patented November 28, 1854.

A description of the nature and operation of this invention would occupy too much space in the Report.

Claim.—In combination with the Jacquard apparatus or series of lifiers, their lifting mechanism, and the rotary regulator pin-wheel, or its equivalent, the secondary regulator pin-wheel or cylinder, or its equivalent, and a mechanism, substantially as described, (or the equivalent thereof,) for imparting to the secondary pin-wheel, or regulator, its proper motions and intervals of rest, whereby, by the combined action of both regulators, the weaving of the body of the bag and the bottoming of it are carried on as described; the machinery being adapted to the weaving of plain, twilled, or fancy work, as occasion may require.

No. 12,006.—WILLIAM TINSLEY.—*Improved Mitre-Box.*—Patented November 28, 1854.

The novel feature of this invention is an open cylinder, standing in the centre and at the opposite side of the box. Said cylinder is grooved to carry a guide-plate, and turns about a pivot in the socket of a fulcrum. The figure illustrates this.

Claim.—The hollow grooved cylinder adapted to carry saw-guides, combined with a joint, in a hanging adjustable fulcrum, combined with the box, whose back and bed may be adjusted to different angles, the whole being combined with the heel-guides.

No. 12,007.—E. H. TRACY.—*Inclined Sliding-Valves.*—Patented November 28, 1854.

This valve is adapted particularly to horizontal pipes, etc., and its novelty lies in its shoe C, adjustable to the disk A, and sliding in a groove D D in its casing.

Claim.—The claim covers shoeing a valve in the above manner.

No. 12,008.—GEORGE TUGNOT.—*Improved Rotary Lathe*—Patented November 28, 1854.

This invention is chiefly designed for turning steamship cranks and other bulky work. The object to be turned, A, is passed through the centre of a *c*, and is firmly fixed to the frame B B^1, by means of the side-frames G G^1 and screws *g* g^1, as shown in figure 2. The sliding rest D is constructed in the usual manner, and receives lateral

movement by a screw not shown. The sliding rest is secured to the inner surface of the cylinder C^1, and upon the periphery of the cylinder C^1 are teeth, into which the driving pinion J gears.

Claim.—Arranging one or more slide-rests within a rotary cylinder in the manner described.

No. 12,009.—D. VAN FLEET.—*Planing Machine.*—Patented November 28, 1854.

Claim.—Giving to the throat of the planes the ogee form, the more readily to clear the mouth of shavings.

Also, the combination of the radial arms *b*, b^1, b^2, in pairs, carrying the feed-rollers and planing-knives.

No. 12,010.—WILLIAM WAKELEY.—*Improvements in Self-Feeding Metal Drill.*—Patented November 28, 1854.

Claim.—1st. Providing the crank with a sliding handle, and arranging the pinion F on the same, so that it may be thrown into gear with one or both of the wheels C H, (see figures 1 and 2,) as occasion may require.

2d. The arrangement and combination of the pinion F, spur-wheels C H, and drill-stock B, when provided with a screw B^2, substantially as set forth.

3d. I claim, also, the making the wheel H in sections *h h*, and the substitution of a section having a greater number of teeth for one having a lesser number.

No. 12,011.—THEODORE E. WEED.—*Improvement in Sewing Machines.*—Patented November 28, 1854.

Claim.—The vibrating spring-fly *a*, whether adjustable or not, for taking up the slack of the thread during the descent of the needle, and releasing the thread as the needle enters the cloth, substantially as set forth.

No. 12,012.—WILLIAM WHEELER.—*Improvement in Washing Machines.*—Patented November 28, 1854.

This machine is of that class in which a dasher or beater is caused to vibrate between two corrugated surfaces, and thus beat and press the clothes while they are immersed in the washing liquid. The upper part of the dasher is constructed in the form of a box—which is seen in the figure—within which works the eccentric C, which is attached to the shaft D. This shaft revolves in the upright B, and is operated by a crank. The ends F of the box in which the eccentric C revolves are composed of flat springs of wood, or other suitable material. These springs are secured to the top and bottom only, by screws or otherwise; and thus, as the eccentric revolves, should the dasher be ob

structed before it reaches the end of its path, the spring-plates yield, the eccentric is allowed to pass, and the machine is not stopped.

Claim.—The within-described method of giving motion to the dasher of a washing-machine by means of the eccentric C operating against the elastic plates F, for the purposes set forth.

No. 12,013.—H. RICHARDS and C. F. WINSOR.—*Improvement in Ships' Windlasses.*—Patented November 28, 1854.

Claim.—The screw D, detached from the windlass and encircling it, by which the cable is caused to feed itself by the turning of the windlass in heaving in, as herein set forth.

No. 12,014.—OSGOOD G. BOYNTON, assignor to NEHEMIAH HUNT.—*Improvement in Binding Guides for Sewing Machines.*—Patented November 28, 1854; antedated June 1, 1854.

Claim.—So combining the guide I with, or fixing it on, the presser H, that it (the said guide) may be lifted with and by the presser, and rise and fall with it, so as to accommodate the guide to the varying thickness of the material while the sewing of the binding on such material is being effected; and also to support such guide, so that it may offer no such obstruction to turning of the cloth on the base-plate as it would present, were it supported directly on the base-plate.

No. 12,015.—THOMAS J. W. ROBERTSON, assignor to T. J. W. ROBERTSON and A. E. BEACH.—*Improvement in Sewing-Machines.*—Patented November 28, 1854.

Claim.—Making the interlocked stitch by causing the needle to pass its thread over a stationary thread case *t*, in which the other thread is contained, in the manner described.

Also, the combination of the sliding-frame *f*, needle-bar *g*, and movable cam *m*, in the manner described.

Also, the combination of the feeding-bar *p*, having a plate *r* and feed-roller r^1, with the sliding-frame *f*, as described.

No. 12,016.—ARAD WOODWORTH 3d, and GEORGE CHAMBERLAIN.—*Improvement in Machinery for Making Rope and Cordage.*—Patented November 28, 1854.

Claim.—The arrangement of the bevel gears R S U V W X, or their equivalents, with their guiding holes, for conducting each thread, arranged outside of the centre of the said gears, as set forth, whereby a draught is created upon each thread separately, and the threads in the several spool-frames are prevented from being twisted into strands until they are all brought together, and drawn out of the last spool-frame.

Also, giving the strands, after they are formed, a revolution at the same time and in the same direction that the laying-up machinery

revolves, by means substantially as described, for the purpose of preventing the twist first given from being partially lost or taken out by the process of laying them up; by which each strand retains the same amount of twist that was imparted to it by the twisting-machinery, thus forming an even and hard-twisted rope.

No. 12,017.—AARON H. ALLEN.—*Improvement in Seats for Public Buildings.*—Patented December 5, 1854.

These seats may be constructed singly, or several within a continuous frame. The seat itself is hung on a shaft extending from one standard to the other, as represented in the figure, and marked C, by means of metal straps bent around the shaft and secured at the ends to the seat by bolts or screws, as shown in the drawings. The seat is thus allowed to rise and fall around this shaft as a centre; the seat is connected with the shaft at about one-third of the distance from the back end. There is another shaft F extending from one standard to the other, and far enough above and back of the one just described to admit of the back end of the seat resting and pressing upwards against it when the seat is in a horizontal position, by means of which the seat receives and sustains the weight of the body when in use, thus dispensing with a support or standard at the other end. There is attached to the back end of the seat a weight *e*, so that when the seat is relieved of the pressure upon it, it will rise from the horizontal to the vertical position. This end may be accomplished by springs instead of weights, in which case the spring may be formed around or upon the shaft, spiral or otherwise. Instead of the spring and weight, and to accomplish the same result, the back of the seat may be weighted, and allowed to move upwards and downwards in a groove formed in the standard by a pin projecting from each side of it into this groove, and the lower end of the back attached to the back end of the seat by hinges or analogous devices; so that the back, being heavier than that part of the seat extending beyond the shaft *c*, will, when the seat is relieved of the pressure upon it, fall until the pin before mentioned rests upon the lower end of the groove, and thus cause the seat to rise, as before set forth.

Claim.—The seat, constructed, hung, and adjusted substantially as hereinbefore described, so as to assume and retain the vertical position when not in use, whether by means of the weight or spring, or sliding-back, connected and supported by means of the shaft *f*, in figures 1 and 2, or by pins, or other analogous devices, for the connexion and support of the seats.

No. 12,018.—G. S. BLODGETT and P. T. SWEET.—*Oven for Baking.* Patented December 5, 1854.

Claim.—The principal point claimed as new consists in the adaptation of the reflecting power of galvanization for heating more effectually the interior spaces of baking-ovens, producing thereby economy in the use of fuel.

Also, the little susceptibility of this material to oxidation, which renders the oven more durable; the whole combined with a particular form of furnace.

No. 12,019.—PATRICK CLARK.—*Improvement in Steam-Boiler Alarms.* Patented December 5, 1854.

Claim.—1st. The arrangement of the wheel R, turning on the screw of the tube C, with its rod S S and cap O, or any equivalent device, when actuated by the spring Y, or its equivalent, in relation to the valve-stem F and the tube C; by means of which the arrangement adjusts itself to the varying length of the tube C, as it contracts in cooling, after having given an alarm, or after having been used as an ordinary gauge.

2d. The arrangement of the bell H and disk G, on the valve-stem of the valve of the whistle, when, and only when, such arrangement is used in combination with the arrangement of the first claim.

No. 12,020.—HORACE I. CRANDALL.—*Improved Method of Reefing Sails from the Deck.*—Patented December 5, 1854.

Claim—The arrangement of the rod A with the leaders B, on the under side of the yard, and the manner of reeving the reef-lines C and the pennants D, attached to the close-reef, through the leaders B, connected with the other reefs; and the connecting the reef-points with the leaders on the after side of the sail, and the peculiar arrangement together of the aforementioned parts.

No. 12,021.—JOSEPH D. CROWELL.—*Improved Steering Apparatus.*—Patented December 5, 1854.

Claim.—The manner of combining or arranging the operative parts of the steering apparatus, the rubber-head A and the tiller C; the bearings D of the steering-wheel G being supported directly on the upper end of the rudder and that of the tiller, while the curved rack I is elevated above the deck, about to the level of the top of the rudder-head and the tiller.

No. 12,022.—JOSHUA GRAY.—*Rotary Pump.*—Patented December 5, 1854.

Within a spherical case L two hemispheres B revolve on oblique axes F; these hemispheres are terminated, or capped, by flat or very oblique conical surfaces, whose apices are in contact. A highly elastic diaphragm, passing through these apices, divides the space between these conical surfaces into two parts.

From this construction, it will be seen that, by revolving the axles or shafts E F, a partial vacuum will be formed within the space between the conical surfaces, and, by the usual induction and eduction

pipes, water may be elevated within known limits. Pins I I on one surface, and corresponding holes on the other, render it only necessary to apply the power to one shaft.

Claim.—The combination of an elastic diaphragm with two conical surfaces, arranged as shown and described.

No. 12,023.—JOHN T. HAMMITT.—*Improvement in Railroad-Car Seats.* Patented December 5, 1854.

In this improvement upon car-seats, the main device consists in placing the pivot C, on which the seat D revolves, so far one side of or from the centre, that, as the seat is turned, the legs F, or wheels G in the legs of the seat, shall not run into or across any sockets J^1 J^2 J^3 J^4, except those in which it is intended they shall stop; the said sockets being arranged in a plate I, upon the floor of the car, under the end of the seat which adjoins the side of the car. The seat should always be turned in such a direction as to bring its front towards the side of the car, as it is turned from one position to the opposite. The peculiar mode of hanging the seat upon a pivot near its front edge, from its greater length of seat, avoids contact with the side of the car in turning, and reduction of the width of the avenue or space between the ends of the seat, in a car of a given width.

Claim.—1st. Placing the legs or wheels, or the wheels in the legs, in such a position, in relation to the pivot on which the seat revolves, that, as the seat is turned, they (the legs or wheels) shall not run into or across any sockets except those in which it is intended they shall stop, substantially as described.

2d. Placing the pivot near the front edge of the seat, so that it may be made longer, and turned without coming in contact with the side of the car, substantially as described, thereby permitting the seats to be made longer, and arranged to turn in a car of a given width, without reducing the width of the avenue or space between the ends of the seats.

No. 12,024.—SAMUEL P. KITTLE.—*Improvement in Railroad Switches.* Patented December 5, 1854.

Claim.—I am aware that many devices have been essayed for moving railroad switches by means of the locomotive or cars in passing over the track; but I do not claim any of these independent of the effect which I attain by my special means.

But what I do claim as new is the moving of the switch by a passing train, through the intervention of a slotted cam, which will move and then hold or lock the switch to either rail, against the lateral pressure, without the use of any other device than the slot, pin, and pivot, these being arranged substantially in the manner described. The drawings represent the two positions of the slotted cam.

No. 12,025.—JOHN LILLEY.—*Improvement in Machinery for Separating the Fibre from the Woody Portion of Tropical Plants.*—Patented December 5, 1854. Patented in England July 21, 1853.

Claim.—The combination of the yielding knives or scrapers K with the rollers C, when said knives or scrapers are hung on a toggle-joint, and operated by the cams *a*, and thrown out of or into action with said cams by the weighted levers M, first to receive the material, and then to divest it of the refuse matter, substantially as described.

No. 12,026.—LARNARD F.[4] MARKHAM.—*Machine for Rounding the Backs of Books.*—Patented December 5, 1854.

Claim.—The combination of a pressure-bar *f*, hung upon proper journals, with a yielding table *b b*, upon which the book is placed; the back of the book being shaped by the action of the said pressure-bar and table, as set forth.

Also, a pressure-bar *f*, hung upon sliding journals *g*, and actuated by the friction-rollers *h* and curved guides *i*, so as to give a forward motion to the said pressure-bar, and thereby adapt the machine to rounding the backs of thick books, as herein above stated.

No. 12,027.—OBADIAH MARLAND.—*Improvement in Paper-Making Machines.*—Patented December 5, 1854. Patented in England September 28, 1854.

The nature of this invention consists in vibrating the revolving cylinder-mould while it is immersed in the pulp; by which motion the fibres of the pulp, as they are successively laid on the cylinder-mould, are caused to overlie each other at angles dependent upon the relative velocities of the two motions of the cylinder, viz: its vibrating and revolving motion.

Claim.—In cylinder paper machines, (where the cylinder-mould revolves within the vat, and is partially immersed in the pulp,) the vibrating the revolving cylinder-mould C, and the part immediately connected therewith, as set forth, and for the purpose described.

No. 12,028.—OBADIAH MARLAND.—*Improvement in Paper-Making Machinery.*—Patented December 5, 1854; in England September 28, 1854.

Claim.—Producing within the vat A of a cylinder paper-making machine, currents and counter-currents of the pulp, parallel, or nearly so, to the axis of the cylinder, by the use of spiral conveyors *m* operating within the partition shell H, or by means of their mechanical equivalents, as described.

No. 12,029.—WILLIAM H. MILLER.—*Improvement in Wash-Stands.*—Patented December 5, 1854

The nature of this invention consists in dividing the wash-stand into several distinct parts, some of which are suitable for water-vessels, in such a manner, that while the wash-stand is made ornamental as an article of furniture, it is also rendered convenient for household purposes. E is a pedestal, upon which is placed a clean water-holder, B, provided with a faucet. The top of the water-holder receives upon it a bucket A, for containing the waste-water. In the top of this bucket a wash-basin rim C is placed, in which a wash-basin H is situated, the lower part of which extends into the bucket for nolding the waste-water. The flaring wash-basin rim C catches any water which may be spattered out of the basin H, and carries it down through the perforations *d*, into the bucket A. When not in use for the purpose of a wash-stand, a cover or top G is placed upon the wash-basin rim, and it is thus converted into a table for ordinary purposes.

Claim.—A wash-stand made in sections, having its parts constructed so as to form a clean-water reservoir, a waste-water reservoir to receive the waste-water from the basin-rim, basin, and table-top, substantially in the manner and for the purpose set forth.

No. 12,030.—HENRY R. MILLER.—*Improved Mill for Shelling and Grinding Corn.*—Patented December 5, 1854.

The difference between this invention and that most resembling it consists in the construction of the feeding orifice, in the upper stone, and of the peculiarly shaped receptacle below it, in the lower stone; the one rendering it easy to shell a much larger amount of corn than by previous machines, and the other delivering each ear upon the rubbing and grinding surface in a horizontal position.

Claim.—The construction and arrangement, herein shown and described, of the circumscribed or enclosed concaves N, having their shoulders *s* of equal depth or thereabouts, and made with an abrupt stop at their outer corner, by the junction of the outer boundary-line of the concave with the shoulder *s*, when combined and operating together with the adjusting bosom M in the other stone, and extending, as specified, to cover or act over the whole surface of the concave, whereby the ears of corn fed into between the stones promiscuously, and several at a time, are prevented from passing out of the concave otherwise than over the draught shoulder *s*, and are gradually turned, borne, or pressed by the bosom M against the draught shoulder, an equal extent of contact therewith throughout their length, for the better adjustment of the several ears into a proper cross-wise position for shelling, and travel between the inner furrowed surface of the stones, as herein set forth.

No. 12,031.—Wm. Henry Plumb.—*Improved Machine for Crushing Ores.*—Patented December 5, 1854.

The nature of this invention consists in arranging a series of crushing-rollers E F at the extremities of the radial arms A A of a revolving crank-shaft B, this shaft being geared by two links *c c* to a fixed point D, securing thus a revolving, and at the same time a crushing and sliding motion upon the material to be ground.

No. 12,032.—John A. Roebling.—*Improvement in Steam-Boilers.*—Patented December 5, 1854.

Claim.—The arrangement of the extended grate surface, elaborating or central combustion-chamber *c c*, the tube-sheets *v* and *t*, and the tubular water-surface between the said wheels.

No. 12,033.—Michael Shimer.—*Improvement in Railroad-Car Brakes.*—Patented December 5, 1854.

Claim.—I am aware that the use of a shoe, made of iron or other materials, and pressed down upon the rail by the weight of the car, is a well-known device for checking the speed of a train of cars. I make no claim to such shoe, in or of itself; but I believe this species of brake has thus far proved unsatisfactory, on account of the violent concussions which have resulted in consequence of the defective mode in which they were constructed. I profess to have discovered the remedy for this difficulty, and now ask a patent only for the special contrivances by which this is effected.

What I claim is, the inclined curved bar G and elliptical spring C, in combination with the elastic chain *g* and the slotted bar B, for the purpose of preventing the shoe A from being broken.

No. 12,034.—James E. Simpson.—*Dry Docks.*—Patented December 5, 1854.

This invention consists in making use of the natural clay foundation for the floor of the dock, the sides and back end being formed of piles, the puddling between the inner and outer piling resting upon the clay floor, and forming a continuation of it, after the manner in which coffer-dams are puddled; the front end of the dock, through which the vessels are admitted, being occupied by the gates.

Claim.—The claims are substantially the same as above.

No. 12,035.—Thomas J. Sloan.—*Method of Casting Window-Sashes.*—Patented December 5, 1854.

Claim.—Moulding and casting metallic window-sashes, with auxiliary bars *e e*, *f f*, as shown, to keep the rails straight during the contraction of the metal in cooling, and then to be cut or broken out.

No. 12,036.—DAVID G. SMITH.—*Improvement in the Running-Gear of Railroad-Cars.*—Patented December 5, 1854.

Claim.—What I claim as new, is a six-wheeled truck, having on that end of it next the end of the car a pair of wheels C^1 with semi-conical threads and no flanges, and united to the truck-frame, which is also supported on two other pairs of wheels of the ordinary construction, by the supporting-plate D, king-bolt F F^1, and connecting-rods I I, so that said pair of wheels C^1 may have a lateral motion on the rails, independent of the other pairs, and yet support their due proportion of the weight of the car, substantially in the manner and for the purpose herein described. The figure represents only one-half of the truck, the other half being exactly alike.

No. 12,037.—MATHEW STEWART.—*Improvement in the Manufacture of Brushes.*—Patented December 5, 1854.

A, in the figure, are circular or bell-shaped tubes; B, short cylindroid or elliptical tubes, with which the circular and bell-shaped tubes are united, so as to form one tube, adapted at its outer or elliptical end to compress and give to the bunches of bristle a flattened shape, and within its inner or bell-shaped part to allow the root-ends of the bristles to expand over the tie-wire C, and also to hold the cement.

Claim.—I do not claim the use of conical or bell-shaped tubes for binding the knots of bristles, and leaving room for the expansion of the roots of the bristles in the enlarged end of the tubes, such conical or enlarged tubes so used not being new; but what I do claim is, the use, in combination therewith, of a wire for binding the knot of bristles before their insertion, the said wire being supported or held by coming in contact with the sides of the tubes, or suitable projections thereon, as described.

No. 12,038.—AMASA STONE.—*Method of Extinguishing Fires in Inaccessible Places.*—Patented December 5, 1854.

Mr. Stone suspends a reservoir C in the room, so that it may vibrate freely. Several eduction-pipes J J are so attached to this reservoir, that when water is forced (by an engine) into it, the reaction of the jets issuing from said eduction-pipes will cause the reservoir to swing to and fro, and thus scatter the water over the entire space.

Claim.—1st. The oscillating reservoir, in connexion with exterior water-pipes or hose.

2d. The combination of reacting arms, valves, and reservoir, by which the desired movement of the reservoir is effected. It may be remarked that the jets are alternately shut off and let on by means of what is known as the trunnion-valve arrangement.

No. 12,039.—THOMAS T. TASKER.—*Regulating Furnaces of Hot-Water Apparatus.*—Patented December 5, 1854.

A quantity of water in the vessel F rises and falls, by expansion and contraction of its volume, from the head of the furnace. The floats H H, resting upon the surface of the water, move in correspondence with it, and actuate the rods K K and I, which are linked to the valves and dampers giving admission of air to the furnace. The water expanding from excess of heat, closes the dampers, and *vice versa.*

Claim.—The arrangement of the two sets of floats operating the valves M O and dampers P, and the open vessel F, in combination with a circulating hot-water apparatus, as set forth.

No, 12,040.—JAMES TAYLOR.—*Improvement in Covering Cotton Thread with Wool.*—Patented December 5, 1854.

Claim.—The employment of the rubbing rollers *q r s t*, in combination with the arrangement of mechanism herein described and shown, for uniting the bands of wool around the cotton thread, substantially as set forth.

No. 12,041.—WILLIAM D. TITUS.—*Improvement in Lanterns.*—Patented December 5, 1854.

A slotted sliding cone moving in lateral grooves over an orifice, and dropping down over a tubulated match-holder, protects the lighted match from sudden currents of air, and operates as a safeguard against the communication of fire from sparks.

Claim.—The combination with the lantern-case of the slotted cone D, which is so arranged as to fall by its own weight and fit upon the match holder during the operation of lighting the lamp, in the manner and for the purposes set forth.

No. 12,042.—ELLIS WEBB.—*Hydraulic Ram.*—Patented December 5, 1854.

1st. The inventor avoids lifting the column of water resting on the valve in the air-chamber, by substituting a long conic valve G, which extends above the surface of the water.

2d. A check-valve *f* is introduced into the eduction-pipe, after the water has left the air-chamber, to check the reaction of the water already passed off.

3d. He introduces air, to prevent the rapid absorption of air in the chamber.

Claim.—The claims cover these three essentials to the effectiveness of his ram.

No. 12,043.—ELBRIDGE WEBBER.—*Improvement in Churns.*—Patented December 5, 1854.

This invention consists in constructing the body A of the churn in the shape of an inverted cone, and with a dasher D of the same form, having a projecting flange *b* around the base of the cone; which combination causes the forcing of the entire body of cream from the bottom of the churn at each stroke of the dasher, while the projecting flange creates a friction and agitation of the cream.

Claim.—The combination of the flanged inverted conical dasher D, with the inverted conical cream-chamber A, arranged and operating as described, for the purpose set forth.

No. 12,044.—CYRENUS WHEELER, Jr.—*Improvement in Grain and Grass Harvesters.*—Patented December 5, 1854.

Claim.—Having the cutter-bar *h* provided for the purpose with a socket *z* to one extremity of the arched bar *w*, by means of joints *a a* and segments *b c*, said arched bar being in its turn pivoted in *x* to the main frame A, all for the purpose of giving the cutter-bar *h*, by means of levers *y d* and *g*, a motion independent of the frame, and both rotating longitudinally parallel to the ground, and oscillating radially from the joints *a a* in order to adapt the same to the inequalities of the ground, or to stop its action at pleasure.

No. 12,045.—FRANKLIN DARRACOTT, assignor to GEORGE DARRACOTT. *Improvement in Gas-Meters.*—Patented December 5, 1854.

The improvement consists in the arrangement of two pairs of bellows vibrating between three vertical stationary partitions, and combined with a (common to each pair of bellows) four-way vibrating-cock or valve-piece, through which all the gas measured passes, in going into and coming out of the measuring-chambers. The measuring is performed entirely within the measuring-bellows. The method employed of giving motion to the valve, and the system of arms or levers by which it is rotated, is disclaimed, and the claims are restricted to—

1st. The use of measuring-chambers (Q, R, S, T,) arranged in pairs as described, and similarly enclosed, by means of the flexible leather secured to the stationary and movable diaphragms (*b b*, C C,) the latter (C C) being placed between the chambers and forming one side of each of them, and connected to the parts which they are to actuate, by means of attachments to their peripheries (E E', H H, *c c*,) as set forth.

2d. In combination with the measuring-chambers of a dry gas-meter, the within described rotating valve, (fig. 2,) with its inlet and outlet passages, constructed and operating in the manner herein set forth.

3d. Opening a communication between the space (A) which surrounds the measuring-chambers and the inlet-pipe, when the registering

takes place only from the gas within the chambers, whereby an equa. and uniform pressure exists at all times, upon both sides of the leather which unites the diaphragms.

No. 12,046.—JOHN PEPPER, Jr., assignor to the FRANKLIN MILLS.—*Improvement in Knitting-Machines.*—Patented December 5, 1854.

Claim.—Combining an annular series of hooked needles and a series of radial and sliding hooked needles, so as to operate together and with a rotary toothed-wheel or sinker K and two rotary presser-wheels, and produce ribbed work, substantially as specified.

Also, the improvement of making a part of the cam or lip of the cam-plate adjustable, substantially in the manner and for the purpose of removing a needle of the second series from the rest, when necessary.

Also, the arrangement of the second series of needles, with respect to the other or first series; that is, the so arranging them that their plane shall cut that of the upper ends of the needles of the first set, and dip below and rise above the same; such arrangement causing the stitches of the first set of needles to be elevated and cast off or over the loops or yarn of the second set, by the lifting power or action of the second series, during its rotary motion, as specified.

No. 12,047.—J. REGESTER, assignor to E. CLAMPITT & J. REGESTER.—*Lubricating Apparatus.*—Patented December 5, 1854.

The nature of this invention consists in combining the reservoir with a central conical spindle or stem, by means of two sockets or bearings—one at the upper, the other at the lower part.

Claim.—The combination of the reservoir K with the central conical stem C. by means of two sockets or bearings *f d*, in which sockets there are vents *w r*, corresponding with the vents or passages of the central stem, which are alternately opened and closed by partially revolving the reservoir about the stem.

No. 12,048.—NATHAN AMES.—*Improvement in Polygraphs.*—Patented December 12, 1854.

Claim.—The horizontal parallel wires B B^1 and D D^1, and the connecting wire C, arranged as shown in the drawing, so that by means of them the pen-holder E E may be supported and guided with as little friction and weight as possible, and the elasticity of the wire D D^1 supporting the pens at an equal distance from the paper, when not pressed down by means of the handle H.

No. 12,049.—NATHAN AMES.—*Improved Polygraph.*—Patented December 12, 1854.

This invention consists in arranging two or more tables, one above the other, for the purpose of writing on two or more sheets of paper,

which are fastened to the tables A and A^1. The sheet is fastened to the table A by the strip B hinged to A by the hinges V V, and to the table A^1 by the piece W^1. And also in arranging two or more pens O, one above the other, in the ends of a forked pen-holder, consisting of as many prongs as there are tables, and being moved by means of the wires G G^1, H, I, I^1 and cylinder K, and braces M M^1, and tubes J J^1, and wires L L^1, in the same direction simultaneously. And also in arranging two or more inkstands D D^1 one above another—one for each pen, as shown.

No. 12,050.—GAETEN BONELLI.—*Improvement in Operating Looms by Electricity.*—Patented December 12, 1854. Patented in France August 15, 1853.

Claim.—The application of electricity, or of electro-magnets, to power-looms, in order to raise or to keep in an elevated state the hooks and headles, in the required order to form the design or pattern of fashioned stuff, such as shawls, carpets, ribbons, etc., as described.

Also, the various means of making such designs on metallic surfaces, by means of an insulating material; and the use, for this purpose, of varnish, of weavings or paper painted or colored with metallic substances, of paper cut out, or pinked, or pierced.

No.12,051.—B. F. BROWN.—*Improved Mode of Hanging Carriage Bodies.* Patented December 12, 1854.

Claim.—1st. The combination of the C springs and perches *e*, arranged substantially as above described, for sustaining the weight of the carriage body, and for relieving the said carriage body from sudden jolts; the combined action being such as to give an easy and elastic motive to the carriage body; and, secondly, the combination of the C springs, perches *e*, and thorough-braces *g g*, the said thorough-braces operating to give an easy motion to the carriage body, and preventing the swaying of said body from twisting or bending the C springs.

No. 12,052.—MATTHEW CRIDGE and SAMUEL WADSWORTH.—*Improvement in Oscillating Engines.*—Patented December 12, 1854.

Claim.—The arrangement of adjusting the side-pipe L of an oscillating engine by means of set-screws M M, to act directly on the places where the steam reacts, viz: opposite the steam and escape openings in the surfaces *c d* of the side-pipe, and of resisting at the same time the reacting power of the steam against the side of the cylinder, by means of a counter set-screw N; the set-screws M and counter set-screw N forming a complete system of regulation, for the purpose of keeping the surfaces between the cylinder and side-pipe steam-tight, and adjusting the position of the cylinder, as herein set forth.

No. 12,053.—WILLIAM H. CUMBERLAND.—*Improvement in Machine for Bending Metal.*—Patented December 12, 1854.

(*Note.*—This improved machine is too complex to be understood without the specification and all the drawings, which are too extensive to be given here.)

Claim.—What I claim as my invention is—

1st. The arrangement and connexion, in any manner substantially as herein described, of the parts A B and C, termed, respectively, the bed, the down-hold, and the die-piece, and employing the two former for holding the slat or piece of metal to be operated upon, and the latter for holding the die, or dies, whereby the resistance of the slat or piece operated upon, to the bending or forming operation, causes it to transmit the power necessary to produce the pressure for holding it, as herein fully set forth.

2d. Furnishing the down-hold, or movable holding-part B, with a catch W, which is so formed and arranged that it may be brought to a suitable position to catch on the die-piece, or on an arm attached thereto, when the die-piece has moved back to a certain distance after the die has done its work, and thereby attaching the down-hold to the die-piece, so that the former is raised by the movement of the latter, and thus caused to liberate the slat or other article which it has held in place.

3d. Controlling the operation of the catch W so that it shall only catch the die-piece during every second return movement, or after it has made as many movements as may be necessary to produce the required form on the slat, or other article, by means of the lifter-wheel Z, ratchet Z^1, and click-piece Z^1, all arranged and operating as herein described.

4th. Constructing the back part of the face of the down-hold with a series of projections and recesses, and the front *r* of the die-piece, above the die, with similar projections and recesses, fitting to the projections and recesses on the down-hold, as described; for the purpose of affording support to the upper side of the slat or piece on the side opposite the bend, during the bending operation, and allowing the die to work up as close as is necessary to the edge of the bed and down-hold.

5th. The employment of two or more dies e^1 e^2, of different depths, or of different form, arranged in or upon a roll E, which has such movements on its axis, as described, as to bring the said dies successively into operation upon the slat, or other article, whereby a form, requiring two or more distinct operations of the die to produce it, is produced on the slat or article without releasing it.

6th. Attaching the back-hold plate D, which regulates the position of the slats on the bed to the bed, by springs K K, of any suitable description; for the purpose of allowing it to yield to the movement which the slat is caused to receive upon the bed by the tightening of the down-hold, and for allowing the movement which is given to it for the purpose of throwing out the slat.

7th. Furnishing the back-hold plate D with a flat piece D^1 hinged it, so as to be thrown down on the bed at pleasure; for the purpose

of regulating the position of the slat when the second scroll is to be formed, and compensating for the reduced width of the slat, caused by the bending of the first scroll, as herein fully described.

8th. Giving to the back-hold plates D and D^1 the necessary movement to expel the slat or piece, after the scroll or other form is produced on either edge thereof, and suddenly leaving it free to be returned, by the action of the springs K K, to the proper position, to adjust a new slat or piece upon the bed, by connecting it with a lever F F^1, which is furnished with a spring-piece I, which is operated upon, as described, by pieces I^1 I^1 attached to the down-hold, every time the latter moves to liberate a slat or piece.

9th. The arrangement of the dies relatively to the arc described by the axis of the die-roll, as herein described, and represented in figure 8*, whereby the resistance of the metal to the bending or forming operations of the two dies is made to act in such a direction as to cause the die to have a tendency to turn on its axis in the proper direction, to bring the projecting-piece 17 into contact with the stop 18 or 19, as may be required.

10th. The method, herein described, of turning the die-roll E back and forth, to change the position of the dies e^1 e^2 by means of catches x x, which are attached to the bed, and stand in such positions that, when the die-piece swings back, they catch on studs Y Y^1 attached to the die-roll at a distance from its axis.

11th. Attaching the studs Y Y^1 to a pair of levers O O^1, which are attached to the die-roll, and so formed and arranged, and controlled by a spring 33, that, when the studs are caught by catches x x^1, which turn the die-roll on its axis, the levers are caused to act upon a double pawl J, which is so arranged to fall behind either of two projecting pieces 17 32 on the die-roll, for the purpose of holding it against one of two fixed stops 18 19, and to move the said pawl, so as to release one of the projecting pieces and fall behind the other, and thus release the die-roll from the position in which one die is operative, and secure it after it has been moved to the position in which the other die is operative, as herein fully described.

12th. The arrangement of the preparatory dies P P^1 relatively to the bed, the down-hold, and the die-piece, which carries the bending dies, as described; whereby the attendant is enabled to conduct the operations of the preparatory dies upon one slat, and the bending dies upon another slat, at the same time.

No. 12,054.—T. O. Cutler.—*Machine for Crushing and Grinding Minerals, and other Substances.*—Patented December 12, 1854.

Claim.—Combining with the rotary pan or shell, having a rim, against which the substance to be crushed or ground is distributed and held by centrifugal force, substantially as herein described, one or more wheels, with rounded or bevelled treads, and turning on axes radiating, or nearly so, from the axis of the pan or shell, and whose planes of motion are tangent to a circle of less diameter than the rim of the pan, substantially as, and for the purpose, specified.

No. 12,055.—CHARLES DANFORTH.—*Improvement in Throstles for Spinning Cotton.*—Patented December 12, 1854.

Claim.—Connecting together the spindle-rails D D and E E, from side to side of the frame, in two or more sections, connecting the guards *j j* and guide-wire-boards *f f* with the spindle-rails, so that they will traverse with them, and constructing and arranging the traverse movements so that the different sections will counterbalance each other, as described.

No. 12,056.—G. W. FRENCH and WILLIAM WAGSTAFF.—*Improved Method of Destroying Vermin.*—Patented December 12, 1854.

The figures represent one method of applying this invention, which consists in destroying vermin by means of a mixture of heated air and steam, in a somewhat confined space. Steam-boiler A is heated by lamp *g*, and covered by hood *f*. As the steam issues from tube *k*, it mixes with heated air coming from the hood by tube *h*, and the mixture is forced forward in flexible tube *m*, and brought in contact with the furniture or fabrics, for the purpose of heating them, without injury from excess of moisture or dryness. The tube *m* may be passed into the backs of stuffed sofas or chairs, or into a close chamber, in which articles have been placed for the purpose of destroying insects, larva, and eggs, by heat. The inventors disclaim the use of heated air or steam, either separately or when the latter simply issues in a jet from a boiler under pressure.

Claim.—The use of a current of steam, issuing from a boiler under high pressure, in such a manner as to mix with a current of heated air, and to drive the mixture forcibly forward, in a somewhat confined state, until it comes in contact with furniture, fabrics, &c., in order rapidly to heat the surfaces and crevices, for the purpose of destroying vermin, without injury to either cabinet-ware, woollen, or other fabrics, substantially as set forth.

No. 12,057.—MOSES GATES.—*Improved Method of Constructing Hoes* Patented December 12, 1854.

This invention consists in cutting through the plate of the hoe a round hole with notches, as seen at E, and inserting into this hole the end of tube A up to shoulder B, and then heading down the end of the tube as shown at F. Whilst the shoulder B presses one side of the plate, the heading presses the other. The joint is also strengthened by brazing. The applicant pretends to no new process of working metals, but only the application to making a hoe.

Claim.—The construction of the tube or socket with a shoulder on the end, to be attached to the blade or plate; the attachment of the same to the plate, by drawing it through the plate, and hammering down the end of the tube, so as to form a burr or rivet-head on the outside of the plate; and the more firm attachment of the tube or socket to the plate by soldering or brazing, as described in the foregoing specifications.

No. 12,058.—JOHN GOOD.—*Improvement in Coffins.*—Patented December 12, 1854.

This coffin is made with double walls. The bottom is designed to receive a quantity of ice, upon which rests a false bottom D. The space A receives the corpse, above which is placed an ice-tray C, with a glazed window F. This tray has a collar, which fits over rim *m* into a gutter, which is to be filled with water, forming a water-joint to exclude the air when cover B is removed for replenishing the ice in tray C. As the ice in tray C melts, the water thus formed flows through tube I, which with cap G forms a water-valve, which may overflow through tube H. Tube K receives the water from tube H, and also from the melting ice in the lower part of the coffin, and forms a water-valve with cup L, which discharges the excess of water over it top. The inventor is aware that water-valves are in common use.

Claim.—The collar over rim *m*, reservoirs G and L, in connection wit pipes H, I, and K; the various parts being arranged and connected as set forth in the specifications and drawings, and acting in manner and for the purpose herein specified.

No. 12,059.—E. L. HAGAR.—*Harrows: improvement in Securing Adjustable Teeth.*—Patented December 12, 1854.

This invention is seen in figure 2, where tooth H is shown upright, and also (in dotted lines) in an oblique position. The plate E E fits into a recess in the beam A, and both it and the tooth are held in place by a bolt I J, having a nut *f*. By means of notches *e e*, and corresponding tongues, the teeth can be set of any length, and, when worn dull or broken at the point, be readily removed, resharpened, and used again.

Claim.—The manner herein shown and described of securing the harrow-teeth to the frame A, in combination with the means employed for making said teeth capable of being adjusted from a vertical to an oblique position, and of being set to any depth desired, for the purposes set forth.

No. 12,060.—J. W. HOARD.—*Fishing-line, Sinkers, and Floats.*—Patented December 12, 1854.

This invention is described as consisting in making the sinker A hollow, and providing one end thereof with an aperture through which the interior may be loaded and unloaded with shot, whereby it may be made available for use, both as a float and as a sinker.

No. 12,061.—ENOCH JACKMAN.—*Improvement in Securing Carpets to Floors.*—Patented December 12, 1854.

A catch A, formed as seen in the figure, made in one piece of any suitable metal, is secured to the floor close to the bare board. A loop B, provided with hooks *a*, as seen in the figure, made of any suitable

material, is passed over the part *c* of the catch, the hooks having first been inserted in the edge of the carpet C.

Claim.—The hook, hooks, or claws, on the loop, by which said apparatus, as set forth, may be attached to when fastening carpets to floors, or detached from when taking them up, at pleasure.

No. 12,062.—J. JENKINS and J. R. COOKE.—*Improved Hub-bands for Carriages.*—Patented December 12, 1854.

The nature of this invention consists in attaching the cap to the band by means of inclined planes *a a* on the inner part of the band, and serrated projections *b b* on the inner part of the cap, which projections working on the inclined planes serve to tighten the cap, and press its flange air-tight against the absorber, so that no oil can escape, or dust penetrate; together with the use of one or two spring clicks or dogs *e e*, which work in the notches in the projecting pieces on the inner edge of the cap, to hold it firmly in place against jars or accidents, while the cap may be readily removed by a wrench.

Claim.—The combination of above parts.

No. 12,063.—EDWARD C. JOHNSON.— *Improvement in Flyers.*—Patented December 12, 1854.

Claim.—The arrangement and combination of the pins G, (fastened in the end of the arm C of the flyer by the set-screw H,) in connection with the spiral spring F, in such a manner as to render the presser easily adjustable, and so that both the spring and pin shall be contained within the barrel of the presser E, substantially as described.

No. 12,064.—H. A. LUTTGENS.—*Improvement in Cut-off Regulators for Steam Engines.*—Patented December 12, 1854.

Claim.—Operating the cut-off eccentric, which is fitted to turn freely on its shaft, by means of friction produced by the eccentric strap E, and the friction produced by a break-strap upon break-pulley K, in connection with the gearing J H M and segment N, the spindle connecting pinion M and spur-wheel H revolving freely in a bearing, stationary upon and parallel to the crank-shaft, the mechanism receiving its impulse from the revolutions of the latter; the whole operating to the effect, that any friction produced by the brake-strap upon the brake-pulley, greater or less than necessary to counterbalance the friction of the eccentric strap, will cause the eccentric to turn upon the shaft, and alter its angular position in relation to the crank, the break-strap being operated upon by a steam-engine governor of the common construction.

No. 12,065.—J. F. LOVECRAFT.—*Feed-Motion for Re-sawing, &c.*—Patented December 12, 1854.

Claim.—The feed-motion described, consisting of two or more smaller saws D^1 D^2, so united together that the teeth of one come opposite to spaces of the other, and adjustable so that they may enter the board to a greater or less depth, or be entirely clear of the board, effected by the shaft E moving up or down by suitable mechanism.

No. 12,066.—WILLIAM LYON, assignor to F. and G. SIMPSON, B. DODD and C. B. MERRIMAN.—*Improvement in Sewing Machines.*—Patented December 12, 1854.

Claim.—The arrangement of the feeding-pieces—that is to say, the rod H, suspended at one end by a universal joint, so that the unattached end may be permitted to play vertically, and also to rock or vibrate as an axis, and having on said attached end a feeding-finger *i* and arm K, in combination with the governing-studs *m n*, upon the wheel E, as set forth.

Also, the clamp G, in combination with the needle-bar F, and working in connection with the feeding-finger *i*, as described.

No. 12,067.—HENRY H. OLDS.—*Improvement in Propellers.*—Patented December 12, 1854.

Claim.—1st. The combination of the extension guide-bars E E with the frame C, propellers B B, shifting-bars H H, and cross-heads G G, in the manner and for the purposes set forth.

2d. The combination of the shifting-bars H H, the catch I, and shifting-float K, with the frame C, as herein set forth.

No. 12,068.—ELDRIDGE H. PENFIELD.—*Improvement in Dock-Holders.*—Patented December 12, 1854.

This apparatus consists of a pad A, upon which is situated bar B, having at its rear end a joint F, which may be fixed by a spring ratchet *b*, worked by a button *c*. There is also another joint, having a lateral motion, and capable of being fixed by thumb-screw H. The pad is kept in place upon the horse by surcingle and crupper, and the tail of the horse, being held to a bar by means of straps, may be raised and turned to the right or left at pleasure by this machine.

Claim.—The apparatus herein set forth, when constructed, arranged, and made to operate substantially as herein described.

No. 12,069.—JAMES PERRY.—*Improvement in Gold-Collectors.*—Patented December 12, 1854.

Claim.—1st. Collecting the matter containing gold in the beds of rivers, by placing in the bed of the stream a box with a perforated

plate at the top, and an inclined bottom, discharging into a receiving-trunk.

2d. Making the hole in the top plate of such apparatus larger towards the rear end, in combination with the compartments formed by the inclined partition.

3d. The employment of a top-screen, composed of bars, to protect the perforated plate.

4th. The pocket at the lower end of the apparatus, when this is combined with the perforated plate, and compartments, and trunk.

5th. The vertical trunk, with or without an elevation, in combination with the horizontal trunk, so that the matter collected can be easily withdrawn.

No. 12,070.—HENRY A. ROE.—*Improvement in Cheese-Vat.*—Patented December 12, 1854.

In this apparatus A is the vat, placed in trough C, and supported by frame B. The boiler I is a hollow cylinder, heated from the fire-place J. By means of the funnel H, water is supplied to trough C, and, through pipe P to the boiler, whilst the steam, rising direct from the boiler, heats the whole water and the vat A. The whey flows off through perforations in pipe E. The separate devices and the use of steam are not claimed.

Claim.—The combination of the boiler I, pipes O and P, with the chamber C, funnel H, with the vat A, connected with the frame B, arranged in the manner substantially as described, and applied to the purpose set forth.

No. 12,071.—JOEL H. ROSS.—*Hygrometric Regulator for Hot-Water Apparatus.*—Patented December 12, 1854.

A sheet of hygrometric substance is balanced on a pivot, (moving an index over a graduated disk,) and is made to actuate valves in tubes, admitting the vapor of water to an apartment in which the regulator is placed. The water absorbed by the sheet H causes it to preponderate, and thus close the valve; and when the air, on the contrary, becomes desiccated, the sheet H loses its moisture, and gradually opens the valves to admit a supply of vapor.

Claim.—Regulating the hygrometric condition of the air in apartments, by opening and closing the valves E E in the pipes C D by the balance-lever, its action being self-adjusting through the excess or diminution of vapor imparted to the equipoise H, irrespective of the material of which said equipoise is constructed.

No. 12,072.—GEORGE ROTH.—*Improvement in the Jacquard Machine.*—Patented December 11, 1854.

The object of this invention consists in suspending the griff frame and the neck-board from, or attaching them in such a way as to be

capable of a free movement to, opposite arms of levers on a rock-shaft.

Claim.—Suspending the griff-frame A and the neck-board B, wholly or in part, from opposite arms of levers *h h*, on a rock-shaft E, or, what is equivalent, on cams or rotary-shafts, in such a manner that the weight or tension of those cords of the harness which are caught by the griff-frame shall be balanced, or nearly so, by the weight or tension of those which are missed by the frame and rest on the neck-board.

No. 12,073.—SYLVANUS SAWYER.—*Improved Ratan Machine.*—Patented December 12, 1854.

This is a machine for reducing and dressing strands of ratan to a proper thickness and width, the strands having been previously cut by other machinery. In the drawing, F represents a movable bed, the entire periphery of which is grooved, in order to receive the enamelled side of the strand, and retain it in place while passing under the rollers K, N, and O, and between the cutters *a*, *i*, *k*, and P Q.

Claim.—The combination of a mechanism for dressing the enamelled side of a strand of ratan, and a mechanism for reducing a strand to its proper thickness.

Also, the combination of a mechanism for reducing the strand to a proper thickness, and a mechanism for reducing it to its proper width.

Also, the combination of a movable grooved bed or roller, pressure-roller or rollers, and knives, for reducing a strip to the width required.

Also, the combination and arrangement of a mechanism for reducing the enamelled surface or side of the strand, or removing the joints or other protuberances therefrom, a mechanism for reducing a strand to its proper thickness, and a mechanism for reducing it to its proper width, the same being made to act together automatically, each as specified.

No. 12,074.—GEORGE W. STEDMAN.—*Improvement in Sewing Machines.*—Patented December 12, 1854.

Claim.—The tube J, receiving thread and acting in combination with the needle, so that each forms a series of loops, each of which loops receives one, and is received by the next one of the other series, as set forth.

No. 12,075.—D. W. SHARES.—*Improvement in Cultivators.*—Patented December 12, 1854.

This invention consists in the arrangement of the expanding shares *a a*, so that they can be rotated upon the longitudinal axes, in order to set them to cut with varied obliquity; and in putting a levelling-plate *l* under their posterior ends.

Claim.—Connecting the wings or shares *a* to each other, and to the frame of the machine, in such manner that they are made capable of universal adjustment, by hanging them so that they may be turned on extension-bars or rods *e*, projecting horizontally from the rear hinge *c*,

and uniting them together, or otherwise equivalently hanging and connecting them, so that the wings or shoes may not only be expanded or contracted, to vary their width apart, but may also have their depth of entry into the ground, and angular set in direction of their depth, varied to suit various widths of the wings apart, and various conditions of the soil, or other controlling circumstances, substantially as specified.

2d. The arrangement of the levelling or furnishing-plate *l*, operating in rear of the covering portion of the wings, to slightly flatten the tops of the rows, and give a neat and substantial finish to them, as set forth.

No. 12,076.—JEREMIAH STEVER.—*Improvement in Metal-Scraping Machine.*—Patented December 12, 1854.

Claim.—The arrangement of the driving-shaft, the connecting rod F, the slotted lever G, and its fulcrum-lever I, in connection with the rod O and its rocker-shaft C, as hereinbefore described.

No. 12,077.—EDWARD STIEREN.—*Improvement of the Process of Treating the Mother-Water of Salines.*—Patented December 12, 1854.

This is a mode of treating the bittern of salt-works containing chloride of magnesium, iodides, and bromides. The magnesia salt is first converted into hydrate by cream of lime, and then neutralized by sulphuric acid for Epsom salts. The liquid chloride, iodide, and bromide of calcium are treated as follows: A concentrated solution of sulphate of soda, added with stirring, precipitates the sulphate of lime, and leaves in the solution chloride of sodium, iodide of sodium, and bromide of sodium. The chloride of sodium is crystallized out by concentration, and saved as the second product. The mother-water still contains iodide of sodium and bromide of sodium. The iodide of sodium is decomposed and precipitated by the sulphate of copper and protosulphate of iron mixed, in the state of subiodide of copper, washed and dried on the fitter, and sublimed from a mixture of one and a half times its weight of the oxide of manganese. The bromide of sodium remaining in the mother-liquor, together with the washings of the iodine-precipitate, mixed with chloride of sodium, is transferred to a cast-iron kettle, with carbonate or caustic soda, and strongly heated till concentrated to 36° Baumé, when the materials are transferred to a stone retort, and heated by steam and chlorine, passed through it to expel the bromine, which equally as the iodine at the moment of its liberation is condensed in glass receivers, and purified by redistillation over chloride of calcium.

Claim.—The process for treating the bitter water of such of the salines of the United States, for the purpose of obtaining Epsom salts, (or sulphate of magnesia,) iodine, bromine, and a portion of refined table-salt, using for the purpose the apparatus referred to, or any other which may be found to answer the purpose.

No. 12,078.—B. F. TAFT.—*Boring Machine.*—Patented December 12, 1854.

This machine may be set to bore a given depth; and having done so, the auger is brought to its normal position, by a simple arrangement. The stop *e* is set as required on rod V; the auger is then put in operation, and when the part d^1 of axle J comes in contact (or the auger described) with *e*, the rod V, by displacing the two catches *a b*, allows the pins *o o* (actuated by springs) to throw the rack P into gear with pinion I; the revolution of which elevates, of course, the auger. The semi-cuniform of the teeth of the pinion I allows of no engagement with rack P until the rack springs to its place, as mentioned above.

Claim.—The method of arresting and reversing the longitudinal motions of the boring-tool, automatically, so as to bore the holes accurately to the required depth, and then withdraw the boring-tool.

Also, the peculiar construction of the teeth of the rack and wheel, whereby they can be suddenly engaged at any point during the descent of the tool, to arrest the boring at the instant required; and so that, in reversing the motion of the cranks, (to turn the screw-point out of the wood,) the rack will yield, to let the teeth of the pinion slip, until the screw-point is withdrawn, when, by reversing the motion of the cranks, the auger will be raised out of its hole.

Also, the combination of the projection d^1 (on the carriage) with the adjustable arm *e* and the bolts *a* and *b*, whereby the rack is released and left free to engage with the wheel, when the boring-tool has descended to the required depth.

Also, the combination of the projection *s* (on the carriage) with the spring-lever *h* and the thumb-lever *g*, whereby the carriage is held up when the boring-tool is withdrawn from the wood, and the boring suspended. And when it is required to resume the boring, the rack is disengaged from the wheel, and the end of the lever withdrawn from beneath the projection to leave the carriage free to descend.

No. 12,079.—H. WATERMAN.—*Improvement in the Joints of the Tubing of Surface Condensers.*—Patented December 12, 1854.

Claim.—The mode of forming and placing the tubes of a condenser by the employment of collars, as described, with or without the conical pierced tube-sheet, and made at the joints air-tight, by means of India rubber packing, or its equivalent.

No. 12,080.—DANIEL P. WEEKS.—*Improvement in Hot-Air Furnaces.*—Patented December 12, 1854.

Claim.—The combination and arrangement of the extended flame-chamber G, (leading out of the fire-pot,) the two sets of lateral horizontal radiator pipes H I, the connecting pipes O P, the radiator pipe Q, and the flue or pipe R, connected with the fire-chamber and pipe Q, as specified.

No. 12,081.—JACOB WEIMAR.—*Improvement in Locks.*—Patented December 12, 1854.

Claim.—The employment or use of the two sets of slotted circular tumblers n^1 h^1, toothed wheels *e*, disk *d*, and pawls *k m*, arranged as herein shown, viz: One set, h^1, being placed upon a shaft attached to the bolt *b*, and the other set, n^1, placed upon a shaft attached to a sliding plate *a*, so that when the bolt is thrown forward, both sets will be thrown in gear with the toothed wheels *e*, and thereby allowing the slots in the tumblers to be moved so as to be out of line with the projections a^5 c^3, the pawls *k* and *m* preventing the wheels *e* from being moved until the disk *d* is also turned or moved the proper distance.

No. 12,082.—C. W. WYATT.—*Machine for Dressing Spokes.*—Patented December 12, 1854.

The nature of this improvement consists in providing a frame which rests upon a suitable bed-plate, and rotates horizontally about an adjustable axis, the felloe being secured within the frame, and operated upon by vertical knives, as it passes by them, in such a manner as to give the required curvature.

The 1st clause of the claim covers this feature; and the second is, "the combination of the cutters M^1 M^1 with cutters M M and stocks L L, for the purpose set forth;" and the

3d is, "the combination of spring Q with the lever S and standard T, for the purpose set forth."

No. 12,083.—DANIEL L. WINSOR.—*Improvement in Windlasses.*—Patented December 12, 1854.

Claim.—1st. Forming on the surface of the barrel of a windlass a series of spiral scores or grooves which operate to fleet the chain.

2d. Placing friction-rollers in the larger and inclined portion of the windlass-barrel.

No. 12,084.—JOHN ANDREWS, assignor to J. ANDREWS, N. A. RICHARDSON and G. SYMMES.—*Seed-Planter.*—Patented December 12, 1854.

This planter has a scatterer D pivoted at *c*. By means of a zig-zag cam (upon the axles of the travelling wheels,) which engages with stud *b*, the hind-part of the scatterer D has a lateral vibrating motion, whilst a roller under D travels over a corrugated way P, giving a vertical vibration. The seed is fed from hopper F into D, and, falling upon screen H, is scattered through the latter by the double vibration. In the lower part of D is the box *r*, over which is a fine screen *x*, to remove the seed of weeds from the grain. The scatterer is made to swing higher or lower at pleasure, to suit the wind, etc., by means of a crank and screen *t*. The hopper has means to regulate the rapidity of feeding.

Claim.—1st. The swinging scatterer or seed-sower D, operated in the manner substantially as described.

2d. The box *r* and sieve *x*, as applied to the scatterer, for the purpose of separating the seeds of weeds from the grain, as set forth.

3d. The method herein set forth, of raising and lowering the scatterer by means of the screw *b*, or its equivalent, for the purpose as set forth.

No. 12,085.—M. JACOB LIEBERMAN, assignor to GEO. S. HANFORD & Co.—*Improvement in Water-Proofing Cloths, &c.*—Patented December 12, 1854.

The fabrics are immersed in, or otherwise treated with a mixture of equal parts of linseed or animal oil, and four ounces of sugar of lead to every gallon of oil, squeezed out, and dried during about twelve hours, in a chamber heated to from 90° to 120° Fahrenheit, employing occasionally a draught or blast of air for the purpose. This operation is then repeated, and the goods, which have obtained thereby a glossy surface, are treated with a solution of sal ammoniac, in the proportion of 3 to 10 of water, by weight. Such goods, it is alleged, are cheaper, more saleable; produced in ten times less time, with a smaller capital; suit better the current fashions; may be produced at any season of the year; are saturated and not simply coated, and therefore do not peel off; are not sticky, and not subject to self-combustion.

Claim.—The process of preparing oiled muslin, or other similar fabrics, by means of oils, sugar of lead, and a stove-room or drying-oven, substantially in the manner and for the purposes set forth.

No illustration.

No. 12,086.—H. TIEBE and W. MUHLE, assignors to TIEBE, MUHLE, & HOMAN.—*Improvement in Making Teapot Spouts.*—Patented December 12, 1854.

Claim.—Confining the congelation of the metal or stock, in casting, to an exact joining-edge or margin, by applying a part of the mould at a heat above the fusing-point of the stock.

No. 12,087.—JOSEPH PERKINS, assignor to PERKINS & UPTON.—*Improvement in Trussing Yards to Masts.*—Patented December 12, 1854.

Claim.—Placing the centre of the fore and aft movements of vessels' yards nearer to the yards than the masts, when such placing is combined with the extension of the rocker-bolt or spindle, through projection or gallows-brace D, into a fixed bearing upon the mast.

No. 12,088.—CHARLES P. BAILEY.—*Feeding Apparatus to a Machine for Cutting Irregular Forms.*—Patented December 19, 1854.

The invention consists in combining a pattern M, having the outline of the thing to be cut upon it, which moves past and is guided by the head C of the cutting-cylinder B; a mandrel J, united to a long helically or spirally grooved shaft I, so that the material to be cut may

have the outline of the pattern formed helically or spirally around it, instead of in right lines.

No. 12,089.—SAMUEL W. BROWN.—*Improvement in Condensers.*—Patented December 19, 1854.

Claim.—The claims allowed are:

1st. To the lever-valve C, in combination with the inclined plane on the top of the movable lever F, for the purpose of opening the valve with an increased power when the condenser descends, by the yielding of the tube to which it is attached, this yielding being caused by the weight of the water of condensation.

2d. Suspending the condenser by a tube of metal, so remote from the bearing on which this tube rests, that it will yield or spring downwards by the weight of the water of condensation, sufficiently to open the valve to permit the escape of water.

No. 12,090.—THOMAS J. CHUBB.—*Improvement in Gold-Separators.*—Patented December 19, 1854.

Claim.—The arrangement of a series of guide-plates or compartments B, a series of tubes or plates T below the sieve, the bellows C for supplying the blast, and the guide-plates or scrapers *g*.

No. 12,091.—MAJOR B. CLARKE.—*Improvement for Cleaning Seed-Cotton and Feeding it to the Gin.*—Patented December 19, 1854.

Claim.—The combination of a series of parallel bands *j*, operating as a feeding-apron, with the toothed-roller *m*, the teeth being so arranged on the roller as to pass between the feeding-bands *j*, whilst the arms *n* of a beater are so arranged as to pass between the teeth of said roller, and strip them of the cotton as it is carried forwards, substantially in the manner and for the purpose described.

No. 12,092.—D. W. CLARK and S. H. GRAY.—*Double-Acting Force-Pump.*—Patented December 19, 1854.

The figure illustrates this invention so well that the claim is sufficient.

Claim.—The combination of two pistons D C, working in one barrel, with two piston-rods, one c^1 within or through the other, when attached to the same brake, I G, in connection with the other visible arrangements.

No. 12,093.—HORACE J. CRANDALL.—*Bilge-Supporter.*—Patented December 19, 1854.

This invention consists in a contrivance for holding vessels in an upright position by having a supporter hauled under the bilge of the vessels in dry, sectional, or railway docks.

Claim.—The making of bilge-supporters with standards C E and braces D, with rocker movable joints H, with the sheaves or rollers J and sails J, for the bilge-supporters to rest or move upon when not loaded, and for the use of dry, sectional, or railway docks, substantially as herein set forth.

No. 12,094.—DANIEL FITZGERALD, THOMAS ROGERS, and WILLIAM C. WALKER.—*Ferry-Boat Guards.*—Patented December 19, 1854.

The nature of this invention consists in so arranging a fence E, in combination with levers B C and spring D, that when the boat is not in contact with the wharf, the fence is up, thereby preventing passengers from attempting to jump on or off the boat; and when the boat has reached the landing, the cat-head A is pressed in, and forces the gate or fence to drop down out of the way.

Claim.—The use of the cat-head A, and connected apparatus, to effect at the arrival of the boat the removal of the guard, in the manner substantially as described.

Also, the removal of the guard by the action of the boat against the apparatus, substantially as described.

No. 12,095.—JOHN S. GAGE.—*Improvement in Clover Harvesters.*—Patented December 19, 1854.

Claim.—Gathering clover and other seeds from the standing stalks by means of a hollow cylinder D provided with a series of toothed bars E, arranged as herein shown or otherwise, so that the teeth of said bars will, as the cylinder rotates, be forced outward through holes *b b b* in front of the cylinder, and comb the seed and chaff from the stalk; the teeth being drawn within the cylinder when at its top, and the seed and chaff stripped from them, so that it may pass into the box A, as herein described.

No. 12,096.—GEORGE W. GRADER and BENJAMIN F. COWAN.—*Improvement in Grain Mills.*—Patented December 19, 1854.

In this arrangement for governing the feed, a sliding table is moved in keepers or guides, back and forth, by a tangent screw, enlarging or restricting the opening on one side, the other being occupied by the curved spring, which, from time to time, is moved by the stud affixed to one side of the spindle to prevent choking of the said opening.

Claim.—Regulating the feed by the combination of the spring A and the eccentric jet E, in the manner herein set forth.

No. 12,097.—S. HADLEY, Jr.—*Impact Water-Wheel.*—Patented December 19, 1854.

The inventor places spiral buckets upon a conical hub, and conducts the water through a scroll flume, so as to impinge normally against these buckets.

Claim.—The form and construction of his wheel as follows: Making the surface to which the buckets are affixed concave or butt-shaped, in combination with spiral-formed buckets, so curved as to receive the water perpendicularly, and gradually diminishing their capacity from the centre to the periphery. Also, the adjustable collar *m*, bevel wheels, and gear wheel, combined to tram and sustain the wheel, and to adjust it to the stationary parts. Also, the scroll-flume, constructed and combined with the other parts as described.

No. 12,098.—Isaac B. Howe.—*Improvement in Machines for Straightening Metal Bars.*—Patented December 19, 1854.

Claim.—The combination of a lever beam B, sliding fulcrum F, operating screw A, and sliding yoke or hold-fast G, as herein shown.

No. 12,099.—Wm. B. Leonard.—*Improvement in Registering Dynamometers.*—Patented December 19, 1854.

This is a mechanism which continually multiplies the force exerted by a rotary prime-mover into its velocity, and adds the products and indicates their sum, so as, at any time, to show on inspection the whole amount of power that has been given out. The main shaft *b* is connected with the driving-shaft *a*, through the medium of springs b^2; and upon the shaft *b* is a grooved collar c^2, which traverses along the shaft *b*, according to the greater or less yielding of the springs b^2 to the force applied, as in the common indicating dynamometer for rotary motion. This traverse motion of c^2 is produced by projection a^3 from the shaft *a*, acting upon cams c^3, connected to c^2 by rods *c c*; and in the groove of c^2 plays the end of a crutch lever c^5, by which its traverse motion is communicated through a second crutch and grooved collar to a circular disk *g*, the edge of which rests upon the face of another circular disk f^5. The form of the cams c^3 is so adjusted that, for equal increments of force, equal degrees of motion are produced in the disk *g*; and when no force is exerted by the shaft *a*, the disk *g* rests upon the centre of the disk f^5. Thus the distance from the centre of f^5 to the point of contact, where *g* rests upon it, is made a measure of the force transmitted from the shaft *a* to the shaft *b*. On the other hand, the velocity of *b* is measured by the velocity of rotation of the disk f^5, the latter being directly connected with *b* by suitable gearing. The product of the force and velocity is therefore measured by the velocity of rotation which *g* receives from f^5; and that rotation being communicated through a feather and groove to the axis g^1, and from that to an ordinary counting apparatus, the latter will exhibit the progressive accumulation of the sum of all the products, or the total amount of power that has been given out.

No. 12,100.—CHARLES MERRILL.—*Improvement in Sash-Fastener.*—Patented December 19, 1854.

Claim.—The arrangement of a wedge L and its mortised plate D, with a spring-bolt E and its catch-plate G, for the purpose of drawing sashes A B together.

No. 12,101.—JAMES MYERS, Jr.—*Improvement in Making Sugar-Moulds.* Patented December 19, 1854.

The nature of the improvement consists in arming the bottom of the mould A on its exterior with a ring D of cast-iron, which is united to the mould case and the base band C of the same, by being poured in between the two when the cast-iron is in a molten state, thus forming a protection to the base of the mould against the several blows firmer than the heretofore-used flange turned round the base of the mould.

Claim.—Filling the space between the base band and the mould case with molten iron, or other suitable metal, in such manner that the metal, by uniting with the base of the mould case, will, when cooled, form a complete and durable armor for the same, substantially as herein set forth.

No. 12,102.—GEORGE REYNOLDS.—*Improvement in Composition for Tanning.*—Patented December 19, 1854.

Twenty hides with the hair on are steeped for six weeks in the following solution, viz: 1 bushel of muriate of soda, 1 bushel of alum, and 6 pounds of sulphuric acid, diluted with 3 hogsheads of water. The hides are to be beamed, and when steeped as stated, they are removed and dried, and then stuffed, or rubbed with tallow or oil, according to circumstances. But the hides are not steeped in tanning-liquor till finished. They are calculated to be used for moccasins, &c., with the hair next the person.

Claim.—The claim is confined to the composition stated.

No. 12,103.—JOHN P. SHERWOOD.—*Improvement in Nail-Feeding Machines.*—Patented December 19, 1854.

Claim.—1st. Connecting the tube J to a vibrating carriage, and combining said tube and carriage with the sliding-plate F, the lever E, the hook *m*, the cam-wheel B, and the shaft A, in such a manner that the forward end of the tube will be elevated during the first half of its semi-rotary movement, and be depressed during the latter half; and then be firmly held a sufficient length of time for a nail to be cut from the plate.

2d. Also, the combination of the flaring jaws I I with the end of the tube J, in such a manner that they can be adjusted to guide a nail-plate of any width.

3d. Also, combining the nail-plate holder *e* with the arm L, the rack-bar K, the spring *f*, the pinion H, the lever D, the cam-wheel C,

and the shaft A, in such a manner that the nail-plate holder will be withdrawn at the moment its semi-rotary movement commences, and be pressed forward at the moment it ceases.

No. 12,104.—JONATHAN SMITH.—*Method of Holding Vessels by the Keels in Docks.*—Patented December 19, 1854.

The invention is thus described:

The keel-block B rests on and is confined to the bearer A; the pawls *c c* slide in straps D and E, and are hauled up and down by the ropes or chains F G. When hauling a vessel on the dock the pawl on the opposite side is raised, and the vessel hauled against it; and then the opposite pawl is raised, thus confining the vessel on the centre of the keel-blocks between the pawls.

Claim.—The arrangement of the keel-pawl as herein described.

No. 12,105.—JOHN J. SPEED, Jr., & J. A. BAILEY.—*Shingle Machine.* Patented December 19, 1854.

This machine planes and joints the rifted shingle by means of reciprocating beds and knives. The piece is placed against the catch *r*, and (the machine being put in motion) is carried beneath and in front of the next catch J; then to catch *i*; then to *g*. As it is necessarily forwarded by said dogs, it is first jointed by side-knives *j*, which adapt themselves (by means of springs and arms *q*, *k*, *l*, *n*, etc.,) to its varying width. It is then similarly carried to the reciprocating knives *h*, *h*, *h*, and *u*, *u*, *u*, and planed on both sides.

Claim.—"Combination of the reciprocating frames B C and feeding-bar on catch L; these frames having cutters *h*, *h*, *h*, *u*, *u*, *u*; and *j*, *j*, and the feeding-bar or catch giving the shingle respectively intermittent motion, for purposes set forth."

No. 12,106.—LOUIS STEIN.—*Improvement in Revolving Fans for Apartments.*—Patented December 19, 1854.

In this fan the wings are hinged along one edge to horizontal arms *i*, projecting from a hollow shaft *b*, hung on a pendant stud *a*, attached to and sustained from the ceiling of an apartment, the said wings being provided at their inner ends with crank-arms K, which, as the shaft rotates, strike against cam-formed projections or tappets *b*, which cause the wings to vibrate on the arms to which they are hinged, and thus agitate the air in the apartment by a revolving and flapping motion. The rotary motion is imparted by electro-magnets, connected with a suitable galvanic battery.

Claim.—Giving the combined revolving and flapping motion to the wings of a fan, for cooling apartments, by having the wings hinged by one edge to arms projecting from a rotating shaft, and provided with crank-arms, which, as the arms revolve, strike against fixed tappets, or cams, to give the flapping motion, substantially as specified.

No. 12,107.—SAMUEL TAGGART.—*Improved Machine for Packing Flour.*—Patented December 19, 1854.

By reference to the figure, the claims explain this improvement.

The employment or use of the clutch G^1, formed of a cylinder or thimble G^1, provided with a collar K, and having studs or ribs *f f* on its inner periphery, which studs or ribs act against spiral flanches or ribs *e e* on the packing-shaft C, said cylinder or thimble having a constant rotary motion given it; the other parts of the clutch being otherwise constructed, arranged, and operating in the manner as shown in the figure. Fig. 2 represents a section of the thimble G^1 on a larger scale.

No. 12,108.—NATHAN THOMPSON, Jr.—*Improvement in Life-Preserving Seats.*—Patented December 19, 1854; in England, September 18, 1854.

Claim.—The combination of the adjustable buoyant bottoms, acting and secured as shown, with a buoyant top.

No. 12,109.—GREY UTLEY.—*Improvement in Boot-Crimping Machines.*—Patented December 19, 1854.

This is an improvement upon a description of crimping machines, in which the two jaws through which the leather is forced down are provided, each, with a series of ridges, between each pair of which the leather passes in succession, but which are objectionable from the fact that when the leather is pressed between the first pair of ridges and opens them, all the others are necessarily separated at the same time, and cannot act with equal force upon the leather, when it reaches them. The improvement consists in making each ridge on the edge of a rubber B, whose motion is independent of that of the others, and each of which is pressed up to the crimping board C, over the edge of which the leather is stretched by its own spring *c*.

Claim.—The double row or series of independent and disconnected angular-shaped rubbers B, placed opposite each other, and movable in horizontal guides *b*, to and from the centre; a spring *e*, behind each rubber, effecting a gentle pressure upon the leather as it is pressed down between the rubbers by a crimping board C, and each pair of rubbers retaining their pressure towards the centre and from the edge of the crimping board upward, stretching the material until it shall have passed successively through the entire series, substantially as hereinbefore set forth.

No. 12,110.—DANIEL P. WEEKS.—*Oven Cooking-Range.*—Patented December 19, 1854.

The invention alleged in this case consists entirely in the peculiarity of the route or course through which the ignited gases, smoke, &c., are conveyed.

No. 12,111.—Wendell Wright.—*Improvement in Spring-Bed Bottoms.* Patented December 19, 1854.

This invention consists in making the bottom upon which the bed or mattress rests, of wood, and in a great number of separate and independent sections D, (as seen in the figure,) and arranging each and all o said sections upon ordinary spiral springs G, placed around central guide-rods F, secured to the centre of said section and playing freely up and down, in holes cut through the slats or bars of the bedstead; and also providing each and all of said sections with two other guide and bracing rods E E, which also play up and down, in holes cut through the bars of the bedstead, and keep said sections from having lateral play while the weight is upon the bed or mattress.

Claim.—The manner herein described of making the elastic bottom of bedsteads of wood, and in a great number of separate and independent square or other suitable sections, in combination with the manner, herein shown and described, of arranging said sections for the purposes set forth.

No. 12,112.—Robert Griffiths & George Shield, assignors to R. Griffiths.—*Improved Machine for Making Horse-Shoes.*—Patented December 19, 1854.

Claim.—The arrangement of the sliding-former I I and rising griper O, operated so as to gripe the bar both edgewise and flatwise, at its mid-length.

2d. The spring projecting plates or cheeks 5, on the one side of the dies of the bending jaws e e^1, acting in connection with the face-plate of the sliding shearing apparatus I I, n, and q, on their other side, for the purpose of preventing the metal from bending laterally whilst being turned around the former.

3d. The channelled bending jaws e e^1 for the purpose of confining the outer margin of the shoe during the process of grooving and punching, the side of the shoe being supported by the convex shoulders of the male former u.

4th. The arrangement of the bending jaws e e^1 and swaging die i i, for the purpose of imparting the desired relative width and thickness at every part, and of clamping it when thus formed, whilst it is grooved and punched by a separate die w x, working around the swaging die, and attached to the sliding box n, and secured by bosses y.

5th. Retaining the shoe in the gripe of the bending jaws e e^1, by means of the cams j j, which operate them, having a portion of their periphery the arc of a circle described from the centre of motion, until the grooving and punching bits w x, attached to the sliding box n, and male former u, are withdrawn, in order that the shoe may drop freely the moment it is released from the jaws.

No. 12,113.—Wm. F. Ketchum, assignor to Rufus L. Howard.—*Improvement in Grain and Grass Harvester.*—Patented December 19, 1854.

The improvement consists in making a reaper fit for mowing, by providing a driving-wheel admitting of the reduction of its periphery,

whereby the cutter-bar can be made to ride close to the ground, and the velocity of the stroke of the sickle is increased when the machine is desired to be used for mowing.

Claim.—Enlarging the driving-wheel, for the purpose of changing the mower into a reaper, and *vice versa*.

No. 12,114.—ELISHA PRATT, assignor to ELISHA PRATT and H. P. UPTON.—*Improvement in Leather-Splitting Machines.*—Patented December 19, 1854.

This improvement is designed for the purpose of keeping the leather more uniformly and evenly pressed up to the gauge-roll, however variable its thickness; and consists, first, in the use of a roll composed of a number of metallic sections or rings *q* arranged upon a shaft F, and connected therewith by means of feathers *p* and grooves *r*, and operated upon by spring *t*, as shown in the drawing. Secondly, in the use of a feed-apron N, composed of a thickness of India rubber or other similar material, cemented between two thicknesses of canvass, so that it may be elastic in the direction of its thickness only; and therefore, while forming, for a portion of its length, a cover for the sections *q*, is not liable (like common India rubber covered rolls) to be torn off or forced back into knots or bulges by an advancing protuberance in the leather.

Claim.—I do not claim the use of rolls composed of sections of rings strung upon a shaft, when the sections and shaft are allowed to revolve independently of each other; but I only claim the same in combination with the springs *t*, or their equivalent, and when they are so united with the shaft F, which carries them, that while they are permitted to rise and fall to accommodate themselves to the varying thickness of the leather, they are at the same time forced to revolve with the shaft, and feed the leather into the machine, as described.

2d. I claim the feed-apron N, non-elastic in the direction of its length, and elastic in the direction of its thickness, constructed in the manner substantially as described, for the purpose set forth.

No. 12,115.—MILTON ROBERTS, assignor to M. ROBERTS and H. E. PIERCE.—*Machine for Turning Prismatic Forms.*—Patented December 19, 1854.

Operation.—By means of a shipping lever A^2 the pulley N is unclutched from the shaft O, and the carriage remains stationary while a block is centred in the lathe. The pulley N is again clutched, and the carriage advanced towards the material with a regulated movement. The cylinder having finished its cut, the carriage commences to recede, and the latch E^2 strikes against the spindle H, and withdraws the catch *b* from the hole in the dial-plate G; the pin *m* then strikes the arm B^2, and the dial-plate is revolved until the catch *b* falls into the next hole *a*, and a new portion of the block is presented to the cutters, which advance again as before. The number of holes in the groove *c* correspond with the sides to be given to the finished article.

No. 12,116.—W. P. N. FITZGERALD, assignee of ALLEN B. WILSON.—*Improvement in Sewing Machines.*—Patented December 19, 1854.

Claim.—The device in the sewing machine for feeding the cloth along, consisting of a bar K furnished with points or notches, having a vertical or up-and-down motion for fastening the cloth upon, and releasing it from said bar by striking it against a plate or spring *f*, and a lateral motion, or motion forward and back, for feeding the cloth along after each stitch, substantially as set forth.

LIST OF RE-ISSUES AND CLAIMS FOR 1854.

No. 258.—*Improved Process of Manufacturing Variegated Roving.*

We claim, as our invention, the mode of manufacturing the variegated roving, or that composed of separate masses of fibrous material of different colors, laid together as described. Our said mode being a combination of processes, which consists in feeding or disposing the fibrous material upon the main card-cylinder, in strands, bands, layers, or masses, of different colors, and so that they shall be disposed side by side of each other, and around such cylinder, essentially as specified, and removing such fibrous material from the said main cylinder by a doffer or doffers, when constructed and made to operate therewith, substantially as hereinbefore specified.

JONAS HOLMES.
EPHRAIM FRENCH.

No. 259.—*Improvement in Grass-Harvesters.*

What I claim as my invention is:

1st. Sustaining the outer end of the rack-piece D, in the manner set forth.

2d. The shield-plate G, in combination with the shoe and cutter-bar, for the purposes aforesaid.

WM. F. KETCHUM.

No. 260.—*Improved Shingle Machine.*

I claim riving, and carrying forward of the riven shingle, by the intermittingly reciprocating movement of the riving-knife stock, or frame, so as to be operated upon successively by the shaving and edging knives, said motion being imparted by the movement of the riving-knife stock, through the intervention of the spring-hooks, stops, or dogs, or their equivalents, substantially as described.

ENOCH R. MORRISON.

No. 261.—*Improvements in Sub-strata for Pavements.*

I claim: 1st. Leaving seams or other openings in the concrete foundation, substantially in the manner described, that the direct escape of the water, gas, &c., may indicate the point or points at which repairs in the pipes are required.

2d. The constructing of panels, or sections, in the concrete foundation B, to give access to pipes and conduits below by the application and combination therewith of frames *d d*, formed of any suitable material, with the thinner edge upwards, to allow the concrete mass to be lifted out when necessary, substantially as described, when this is combined with a paved roadway of any kind laid thereon, as described.

HORACE P. RUSS.

No. 262.—*Improvement in the Cotton Gin.*

I claim the combination of a stripping-plate, breast-plate, and drawing-roll, substantially as herein set forth.

FONES MCCARTHY.

No. 263.—*Improvement in Fire and Burglar Proof Safes.*

I claim the use of glass or slag, in a vitrified state, in the filling of safes or vault-doors, either poured molten into the spaces, or inserted in plates, substantially as described.

F. C. GOFFIN.

No. 264.—*Improvement in Cutting Boots.*

What I claim as new in this mode is, the tongue *i*, which gives the vamp a more exact crimped curve, covers the seam *m n* from being seen, and secures it from ripping, and keeps the seams *l m* and *p n* permanent, by receiving the strain which comes on them when drawing on the boot; which improvements may be applied to any material whatever of which boots may be made.

DANIEL LYNAHON.

No. 265.—*Improvement in Harvesters.*

What is claimed, is:

1st. The combination of a series of removable cutters with the links of an endless revolving chain, which carries them successively into contact with the grain or grass to be cut, substantially as herein described, whether the cutters be contiguous, or placed at intervals upon the chain.

2d. Making one end of each cutter sharp, in order that, by pressing against the adjacent end of the next cutter, straw, grass, or other intervening obstructions, may be cut in two and allowed to pass out, the cutters thus freeing themselves from obstructions which otherwise might either choke or break them.

3d. Making the cutter narrower at one end than the other, so that, as they are carried forward by the chain in a straight line, they may present a series of inclined cutting-edges, against which the stalks of grain or grass are pressed by the reel or the progress of the machine, until severed, by which arrangement of the cutting-edges their efficiency is greatly increased.

4th. I claim the employment of a sweep or turning-rake, for the purpose of sweeping the grain off the platform in such manner as to deposite it upon the ground, with its stalks at right angles, or thereabouts, to the path of the machine.

5th. The method of vibrating a sweep-rake H, and turning its teeth, as herein set forth, so as to pass over the grain, and to seize and sweep it off the platform, whether the devices employed to effect these movements be such as described, or others equivalent thereto.

6th. The method of holding a sweep-rake firmly, with its teeth at the proper distance above the platform, by a latch or the equivalent thereof, which, operating with a greater certainty than a weight, spring, or other fastening not rigid, more effectually prevents the rake-teeth from rising so as to override the grain, and at the same time avoids the necessity of moving a heavy weight, or overcoming the tension of a strong spring in elevating the rake preparatory to its retrograde stroke.

7th. The construction and arrangement of a sweep-rake and the mechanism for operating it, in such a manner that it is carried back and forth, and raised and lowered, without support at the outer end, and thereby rendering it less liable to become entangled with the grain and clogged or broken.

8th. The method of changing the frequency of the alternations of the rake, or other device, for discharging the grain, by means of the wheels 3, 4, 5, and pinions 3^1, 4^1, 5^1, or other equivalent devices for producing a different movement, for the purpose of varying the size of the sheaves, as may be required, substantially as set forth.

WILLIAM H. SEYMOUR.
DAYTON S. MORGAN.

No. 266.—*Improved Mill-Stone Dress.*

I claim the described mode of dressing mill-stones; that is to say, in ridges and furrows, and also in furrows and lands tangential to the eye, each furrow and land gradually increasing in width, and the furrows in depth, from the eye to the circumference, being of a triangular shape in their vertical cross-section, and every alternate ridge or land being omitted from the eye to the circle A, forming large triangular cavities S for the admission of the grain to be broken preparatory to its passing to the long furrows to be ground into flour.

I claim, furthermore, the above-described form of dress for mill-stones, either for the ridges or the lands, or the furrows separately, or as combined, as above described, in ridges and furrows, or in lands and furrows.

I claim the tangent form or shape given to the ridges and lands, and furrows.

ELISHA S. SNYDER.

No. 267.—*Improvement in Drying Grain.*

I claim the method of seasoning or kiln-drying substances by using steam in a vessel which has an opening communicating with the atmosphere, to limit the pressure, for the purpose of transmitting caloric to the substances to be seasoned or kiln-dried, or the vessel or vessels containing them, substantially as specified.

HENRY G. BULKLEY.

No. 268.—*Improvements in Sewing Machines.*

We claim the combination of a needle *a* and a hook t^1, as constructed and made to operate together, substantially in the manner and for the purpose of sewing cloth, (or any other material or materials capable of being sewed,) as specified.

We claim the spring or curved arm a^4, for the purpose of holding the cloth to the surface of the feeding apparatus by a yielding pressure, in the manner set forth.

ISAAC M. SINGER.
EDWARD CLARK.

No. 269.—*Improvement in Machines for Pegging Boots and Shoes.*

I claim the automatic combination constituting my improved pegging machine, and composed of the following elements, or their mechanical equivalents, enumerated in the succeeding claims, and comprising the peg-cutter, peg-driver, centre-guide, shoe-movement, &c.

I also claim the cutting of the peg from the peg-blank by a lateral motion of the cutter against the side of the blank, the cutter assisting to hold the blank in position while it is driven, substantially as herein described.

I also claim the combination of parts composing the "universal movement carriage," consisting of a disk supported upon the arm of a horizontal lever, so that it can be raised or lowered, surmounted by the device for holding the work, having a free motion in all directions, substantially in the manner and for the purpose described.

I also claim the centre-guide for directing the movement of the shoe, or other article, in the course indicated by the pattern of the sole; for the purpose of keeping the line of the pattern as herein specified, so as

to keep the line of the pattern coincident with that of the awl and peg-driver.

I also claim so constructing, arranging, and operating the shoe-carriage, that each point of the sole, which is to receive a peg, shall be brought successively to the same point under the stationary pegging standard; so that the pegging shall be effected, without interruption, entirely around the shoe, or other article, substantially as herein described.

I also claim, in combination with the movable carriage, the stationary pegging standard, made adjustable, or the equivalent of that adjustment; so that the pegs can be driven at any distance from the edge of the sole or centre of motion of the carriage holding the material to be pegged, as above set forth, so that a new pattern will not be required to drive a second row of pegs with the first row.

J. J. GREENOUGH.

No. 270.—*Improvement in Gun-Locks.*

I claim giving such a shape to the tumbler or to the sear, or their equivalents, that the sear will not catch and safely hold back the cock in a cocked position except when it is acted upon by a perfectly rigid force.

And, in connexion with the said peculiar arrangement of the tumbler and the sear, I also claim the combination of the jointed levers *f* and *k* with the sear *c*, in such a manner that said levers will rigidly act upon the seat and cause it to safely hold the cock when it is thrown into a cocked position, substantially as herein set forth.

I also claim the set-screw *j*, arranged in such a manner, in relation to the jointed levers *f* and *k*, the sear *c*, and the tumbler *d*, that its adjustment, to a greater or less extent, will render it necessary to exert a greater or a less degree of power upon the trigger to detach the sear from its hold upon the tumbler when the cock is in a cocked position, substantially as herein set forth.

JAMES HULTS.

No. 271.—*Improved Sawing Machine.*

I claim the combination of the notched-plate *u*, pawl *v*, rack *r*, pinion *t*, lever R T, and sectional-pawl *q*, arranged and operating substantially as and for the purposes hereinbefore set forth.

Also, the construction of the boxes C^1, with the opposite inclined inner faces $f^1 f^2$, for giving the requisite set-off to the carriage when gigging back, and again setting up when moving forward for the cut, substantially as herein fully set forth.

CHAS. R. FOX.

No. 272.—*Improvement in Seed-Planter.*

I claim the revolving cylindrical hopper, composed of two hollow buckets or disks *c c*, arranged a suitable distance apart to form a central discharge-passage on a horizontal revolving shaft, for the purpose of holding and agitating the seed, and discharging it in the centre of the furrow in a straight line, substantially as and for the purpose herein described.

CHAS. RANDALL.

No. 273.—*Cut-Nail from Muntz's Metal.*

I claim the new article of manufacture herein described, viz: A yellow-metal nail or spike, made by cutting and heading it in a nail or spike machine; meaning by the term yellow metal, a metal composed of copper and zinc, in the proportions in which they are usually combined in the manufacture of the well known Muntz's sheathing metal.

SAMUEL L. CROCKER.

No. 274.—*Gold Amalgamator.*

I claim the combination of the partition S (dipping below the surface of the water) with the lower distributor, provided at the centre with a discharge aperture for the water and light particles, and at the periphery with apertures for the discharge of the water and heavier particles, for the purpose of preventing the escape of gold over the central or waste-pipe.

I also claim the arrangement of the sliding-tube ferule or waste-gate directly upon the hollow axle of the lower distributor T, the same being for the purpose of regulating the head of water within the said distributor.

I also claim arranging the secondary mercury bath concentric with and below the primary one, in such a manner that the current of water, etc., will return towards the centre of the apparatus, thereby saving room and causing said currents to pass more slowly.

I also claim rubbing the pulverized ore into the mercury, in the manner and for the purpose substantially as described.

WM. BALL.

No. 275.—*Improvements in Bank Locks.*

We claim connecting the series of male tumblers R, &c., with the vibrating portion B of the bolt, in such a manner that all of said tumblers must vibrate with said portion of the bolt, and said portion of the bolt must vibrate with said series of tumblers, whilst any one of said tumblers may be removed endwise, independently of said vibrating portion of the bolt, and vice versa, by which they are enabled to be

operated in connection with a series of entirely independent stationary female tumblers that can be adjusted in different positions, substantially as herein set forth.

2. We also claim the series of female tumblers *s*, &c., when they are secured in such a manner to the lock-case, that, while they admit of unlimited adjustment to suit the different positions into which any key can be made to throw the series of male tumblers R, &c., they are so arranged as to be independent of the longitudinal movements of said male tumblers, or the bolt which is combined with them, and consequently are perfectly protected from injury or disarrangement by said movements, and also from any violence that may be exerted upon the bolt.

3. In connection with the said series of male tumblers R, &c., and the vibrating portion B of the bolt, arranged and combined in such a manner that they *must* vibrate with each other, and can be moved lengthwise independently of each other, we also claim the fixed and strongly-secured studs *b b*, arranged in such positions that the bolt cannot be shot back until the vibrating portion thereof is brought up to the highest point allowed by the matching of the series of male tumblers, with which it is combined, with the series of female tumblers that are combined with the lock-case; by which, when the bolt is shot out, both series of tumblers are perfectly protected from injury by any violence exerted upon the bolt, substantially as herein set forth.

4. We also claim the self-adjusting guard *l*, arranged and operating in the "usher" C, in such a manner that the introduction of powder or picking instruments into the lock, through the key-hole, is effectually prevented, substantially as herein set forth.

5. We also claim the within-described arrangement of the inclined notch *i* on the "usher" C, with the dog G, and the bolt-moving cam E, by which the act of turning the usher, to enable the key which it carries to operate the tumblers, will throw the dog G into such a position as to prevent the said cam E from being brought in contact with the vibrating portion of the bolt during the time said "usher" is being moved; by which the possibility of laterally "feeling" the positions of the tumblers, whilst the key (or a substitute therefor) is in *moving contact* with them, is entirely prevented, substantially as herein set forth.

AUGUSTUS C. HARIG.
DAVID C. STOY.

No. 276.—*Rotary Pump.*

I claim the improvement by which the waste auriferous or earthy matter, that leaks out of the shaft-hole of the case A, is saved and returned into the body of the case, and the wear of the shaft-hole of the chamber *q* prevented; the said improvement consisting in the chamber *q*, the collar *r*, and the passage *t*, as combined together, connected with the case A and the shaft of the fan-wheel, and made to operate substantially as specified.

2d. I claim the rings *k l*, as constructed and applied to the interior of the pump, for the purpose set forth.

WM. BALL.

No. 277.—*Method of Applying Water to Compound Buckets of Flutter-Wheels.*

I claim the so arranging of cuneiform buckets upon the radial arms of flutter-wheels, as that, in passing through an eccentrically formed water-way, three buckets shall receive the volume of water in about the proportions herein described and represented.

DAVID RANKIN.

No. 278.—*Improvement in Sewing Machines.*

What I claim is, giving to the shuttle an additional forward movement after it has been stopped to close the loop, as described, for the purpose of drawing the stitch tight, when such an additional movement is given at and in combination with the feed-motion of the cloth in the reverse direction; and the final upward motion of the needle, as described, so that the two threads shall be drawn tight at the same time, as described.

I also claim controlling the thread, by what I have termed the friction-pad, between the seam and the bobbin, or any equivalent therefor, substantially as described, and for any or all of the purposes specified.

I also claim placing the bobbin from which the needle is supplied with thread, on an adjustable arm attached to the frame, substantially as described; when this is combined with the carrying of the said thread through an eye or guide, attached to and moving with the needle-carrier, as described, or the equivalent therefor, whereby any desired length of thread can be given for the formation of the loop, without varying the range of motion of the needle, as described.

And I also claim, in a sewing machine, feeding the cloth or other substance, to determine the space between the stitches, by the friction of the surface of the periphery of the feed-wheel, or any equivalent feeding surface, substantially as specified, in combination with a spring-pressure plate or pad, which gripes the cloth or other substance, against such feeding surface, substantially as specified and for the purpose set forth.

ISAAC M. SINGER.

No. 279.—*Improvement in Fire-Arms.*

We claim combining the percussion hammer, the piston-slide, and the barrel, so that the said piston-slide shall not only serve as a breech to the barrels, but at the same time as a means of conveying (by concussion) to the priming of the cartridge at one end of the slide, the force of the blow of the hammer upon the opposite end of the slide, as specified.

We also claim the improvement in the carrier, whereby it is not only enabled to be moved downwards while the breech-slide is forward against the barrel or cartridge therein, but is caused to expel from the chamber E, in which it moves, the remainder of the cartridge after such remainder has been retracted by the piston-slide, and while the carrier is being elevated with another cartridge; the said improvement consisting in making the carrier with an opening or passage leading out of the cartridge chamber thereof, and of a width sufficient for the movement of the piston-slide out of the carrier during the descent of the latter, and providing said carrier with one or more projections a^2 or the equivalent thereof, which, when the carrier is elevated, shall be moved against the remainder of the cartridge and elevate and expel it from the fire-arms, as stated; the breech-slide or piston-slide being formed substantially as specified.

We also claim the arrangement and application of the percussion hammer, with respect to the breech-slide H and the trigger-guard lever, so that the hammer may be moved and set to full cock by the pressure or back-action of the slide induced by the action of the trigger-guard lever, as specified.

We also claim the improvement of making the front end of piston-slide with a dovetail recess a^1 (or its equivalent), for the purpose of enabling the slide to seize the metal or remainder of the cartridge and withdraw it from the barrel, when it (the piston-slide) is next retracted, the said remainder being discharged from the slide by the upward movement of the carrier, all substantially as specified.

HORACE SMITH.
D. B. WESSON.

No. 280.—*Improvement in Calorifiers.*

I claim the combination of the water-supply reservoir, the chamber or bed of sand, and a furnace or chamber of combustion, the whole being made to operate substantially as specified.

SAMUEL WHITMARSH.

No. 281.—*Improvement in Smut Machines.*

I claim the manner herein described of scouring and freeing wheat of smut and other impurities, by throwing the mass *out of the concave* at each revolution of the beaters, and *against the inclined or curved face of a chimney*, fitted to an opening at or near the top of the concave; for the purpose of permitting the dust, smut, &c., to pass out, whilst the wheat is returned back into the machine for a second operation, substantially as described.

I also claim, in combination with the concave, the adjustable inclined aprons for conveying the grain through the concave as it is successively returned back into the machine, substantially as described.

JEHU HOLLINGSWORTH.

No. 282.—*Improvement in Rakes to Grain Harvesters.*

I claim the means herein described of transmitting motion from the driving-wheel to the raking apparatus, substantially as set forth.

I also claim, secondly, the collecting, grasping and depositing of the cut product by means of a rake and palm, substantially such as described herein.

JEARUM ATKINS.

No. 283.—*Improvement in Winnowing Machines.*

I claim the automatic graduation of the fan-blast by means of a piston *k* in a passage communicating with the fan-case, balanced by weight to support the atmospheric pressure due to the rarefaction produced by a given velocity of the fan, but movable when said velocity varies; and by connexion, substantially as set forth, with valves regulating air-passages *h* h^1, so operating them as to diminish the capacity of said passages when the velocity of the fan is too great, and produce the contrary effect if the blast be weakened by a diminished velocity of the fan, as hereinbefore specified.

SAMUEL CANBY.

No. 284.—*Improved Rake to Harvesting Machines.*

I claim the guide *p q r s*, arranged as described, in connexion with the tilting-roller *u*, for the guidance of the rake in a path similar to that which it would receive from the human hand, by which it removes periodically the grain or grass from the bed, and frees itself by the retraction of the teeth endwise.

I also claim the application of a thin tight roof to the rakes for harvesters, for the purpose of effecting the separation of the gravel from the falling grain.

SYLVANUS MILLER.

No. 285.—*Improvement in Seed-Planters.*

We claim the connexion of the seed-drill with the hopper when both are worked or raised and lowered independently of the body of the machine, so that both may be thrown into and out of operation at the proper time by one and the same movement or mechanical means, as above set forth.

MOSES PENNOCK.
SAMUEL PENNOCK.

LIST OF DESIGNS AND CLAIMS FOR 1854.

No. 626.—*Design for Cooking-Stoves.*

I claim the combination of the several ornaments and mouldings as arranged together, the whole forming an ornamental design for a cooking-stove.

SAMUEL D. VOSE.

No. 627.—*Design for Cooking-Stoves.*

I claim the combination of the several ornaments and mouldings as arranged together, the whole forming an ornamental design for a cooking-stove.

SAMUEL D. VOSE.

No. 628.—*Design for Cooking-Stoves.*

I claim the combination of the several ornaments and mouldings as arranged together, the whole forming an ornamental design for a cooking-stove.

SAMUEL D. VOSE.

No. 629.—*Design for Parlor Stoves.*

I claim the combination of the several ornaments and mouldings as arranged together, the whole forming an ornamental design for a parlor stove.

SAMUEL D. VOSE.

No. 630.—*Design for Parlor Stoves.*

I claim the ornamental design and configuration of parlor stove plates, as described.

N. S. VEDDER.

No. 631.—*Design for Coal Stoves.*

We claim the combination and arrangement of the ornamental figures, forms, and foliage, as represented, making an ornamental design for coal-heating stoves, known and called the *International*.

CONRAD HARRIS.
PAUL W. ZOINER.

No. 632.—*Ornamental Design for Guitars.*

I claim the plate P, placed within the rosette or opening in the sound-board, and slightly below the interior surface of said board, said plate hiding the interior of the instrument from view, and adding to the ornamental appearance of the guitar, constituting a new and original design for such instruments.

WM. B. TILTON.

No. 633.—*Design for Cast-Iron Legs for Piano Fortes.*

I claim the ornamental design of a cast-iron piano forte leg, as described.

FREDK. STARR.

No. 634.—*Design for Cast-Iron Pedal-Lyre for Piano Fortes.*

I claim the ornamental design of a cast-iron pedal-lyre for a piano forte, as described.

FREDK. STARR.

No. 635.—*Design for Panel Ornament for Stoves, &c.*

I claim the ornamental configuration and arrangement of the parts described, constituting a panel ornament.

ISAAC DE ZOUCHE.

No. 636.—*Design for Stoves.*

We claim the design and configuration of the ornaments and mouldings described, forming an ornamental design for stoves.

JOHN F. ALLAN.
JOSEPH STEWART.

No. 637.—*Design for Cooking-Stoves.*

I claim the arrangement of the several figures and mouldings combined together, the whole forming a design for an ornamental cooking-stove, as described.

SAML. D. VOSE.

No. 638.—*Design for Coal Stoves.*

I claim the combination and arrangement of the several figures and mouldings, the whole forming an ornamental design for a stove, as described.

SAML. D. VOSE.

No. 639.—*Design for Cooking-Stoves.*

I claim the ornamental design for the side and end plates, the feet, and the doors, as represented.

WM. T. COGGESHALL.

No. 640.—*Design for Door and Panel of Cooking-Stoves.*

I claim the arrangement and combination of the central ornament *a b c d* and *e* with the rays B and mouldings *f g*, substantially as described, for the purpose of forming a new ornamental design for a cooking-stove.

M. C. BURLEIGH.

No. 641.—*Designs for Fronts of Clock-Cases.*

I claim the design and configuration of the plate, as described, forming the front of a clock-case.

WM. B. LORTON.

No. 642.—*Design for Air-Tight Stoves.*

We claim the design, configuration, and arrangement of the several ornaments, in bas-relief, as described, forming a new and original design for an air-tight cannon stove.

GARETTSON SMITH.
HENRY BROWN.

No. 643.—*Design for Stove Plates.*

I claim the ornamental design and configuration of stove plates, as described.

JOHN BURGESS.

No. 644.—*Design for Cooking-Stove or Summer-Range.*

I claim the combination of mouldings and ornaments as arranged on the summer range, the whole forming an ornamental design.

JOHN ABENDROTH.

No. 645.—*Designs for the Frames and Handles of Hair-Brushes.*

I claim the ornamental design, substantially as described.

HUGH ROCK.

No. 646.—*Design for Cooking-Stoves.*

I claim the general ornamental design of the stove, shown in the side and front plates, including the legs; and particularly I claim that of each of the oven doors E and F, that of the panel M, that of each of the front doors A B, and that of each leg I.

N. P. RICHARDSON.

No. 647.—*Design for Doors of Gas Ovens of Summer Ranges.*

I claim the ornamental panel *a*, and the ornamental moulding *v*, forming a design for gas ovens or summer ranges.

S. W. GIBBS

No. 648.—*Design for Clock-Case Fronts.*

I claim the design and configuration of the plate described, forming the front for a clock-case.

CHAS. CHINNOCK.

No. 649.—*Design for Portable Cooking-Ranges.*

We claim the design, configuration, and arrangement of the ornaments in bas-relief on the front and ends of the stove, as described, forming a new and original design for stove called Portable Range.

GARRETTSON SMITH.
HENRY BROWN.
JOSEPH A. READ.

No. 650.—*Design for Cast-Metal Clock-Case Fronts.*

I claim the design and configuration of the clock-case front, as described, denominated the "Pillar" pattern.

CHAS. CHINNOCK.

No. 651.—*Design for the Fronts of Cast-Metal Clock-Cases.*

I claim the design and configuration of the clock-case front as described.

CHAS. CHINNOCK.

No. 652.—*Design for Cooking-Stoves.*

We claim the design for Golden Star cook-stoves, as set forth.

JACOB BEESLEY.
EDWARD J. DELANEY

No. 653.—*Design for Parlor Stoves.*

We claim the design for the Gothic Queen parlor stove, as set forth.

JACOB BEESLEY.
EDWARD J. DELANEY.

No. 654.—*Design for Portable Ranges.*

We claim the design for portable range, as set forth.

JOHN F. ALLAN.
JOSEPH STEWART.

No. 655.—*Design for Oven-Doors.*

We claim the design for the oven-door, as set forth.

JOHN F. ALLAN.
JOSEPH STEWART.

No. 656.—*Design for Cooking-Stoves.*

I claim the new design, consisting of the music-staff, raised figures, and ornamental configurations, as described, for the side and front plates of a cooking-stove.

APOLLOS RICHMOND.

No. 657.—*Design for Tea or Coffee Pot.*

We claim the design and configuration of the ornamental work, as described, forming a new and original design for a tea or coffee pot.

WILLIAM HATTERSLEY.
CHAS. DICKINSON.

No. 658.—*Design for a Cooking-Stove.*

I claim the design, configuration, and arrangement of the several ornaments in bas-relief and mouldings, as described, forming the design of stove "Great Republic."

JNO. C. SMITH.

No. 659.—*Design for a Radiator Stove.*

We claim the design, configuration, and arrangement of ornaments in bas-relief, on the body, foot, and urn of the stove "Lady Washington Radiator," as described.

S. H. Sailor.
John C. Smith.

No. 660.—*Design for a Cooking-Stove.*

I claim the ornamental design for the side-plate, and its feet, and that of each door.

Harrison Eaton.

No. 661.—*Design for Well-Curbs.*

We claim the design displayed by a combination of the form and ornaments.

Wm. Douglas.
Benj. Douglas.

No. 662.—*Design for Cooking-Stoves.*

I claim the new design described, for the side-plate of a cooking-stove.

Wm. M. Snow.

No. 663.—*Design for Cooking-Stoves.*

I claim the design, configuration, and arrangement of the ornaments in bas-relief and mouldings, on the several plates, as described, for stove called "Champion Cook."

S. H. Sailor.

No. 664.—*Design for Franklin Stoves.*

We claim the design, configuration, and arrangement of the several ornaments in bas-relief and mouldings, on the plates and foot of the stove, as set forth.

Jno. F. Allan.
Joseph Stewart.

No. 665.—*Design for Cooking-Stoves.*

We claim the general form and proportions combined with the mouldings, figures, and ornaments, substantially as described; the said figures, ornaments, and panels being in alto, in mezzo, or in bas-relief.

HELLER & YOUNG.

No. 666.—*Design for the Fronts of Clock-Cases.*

I claim the composition of ornamental work, described, for the front of a clock-case.

NICHOLAS MULLER.

No. 667.—*Design for Cooking-Stoves.*

I claim the new design, consisting of the ornamental configurations described, for the side and front plates of a cooking-stove.

AMOS PAUL.

No. 668.—*Design for Mole-Traps.*

I claim the ornamental design for a mole-trap, as described.

HENRY FRY.,

No. 669.—*Design for Franklin Stoves.*

I claim the ornamental design and configuration of stove-plate, substantially as described.

WM. RESOR.

No. 670.—*Design for Clock-Case Fronts.*

I claim the design and configuration of the clock-case front, as described, and termed the "Three Bells" pattern.

CHAS. CHINNOCK.

No. 671.—*Design for Clock-Case Fronts.*

I claim the design and configuration of the clock-case front described, and termed the "Harlem Gothic" pattern.

CHAS. CHINNOCK.

No. 672.—*Design for Clock-Case Fronts.*

I claim the design and configuration of the base A, pilasters B B B^1 B^1, buttresses E E, cornice C, crown-piece D, and ornaments *a b c*, combined to form a new ornamented design for the front of a clock-case.

CHAS. CHINNOCK.

No. 673.—*Design for Franklin Stoves.*

I claim the ornamental design and configuration of stove-plates, as described.

WM. RESOR.

No. 674.—*Design for Cooking-Stoves.*

I claim the design, configuration, and arrangement of the several ornaments in bas-relief, and mouldings on the front sides and feet of the stove "Atlantic," as set forth.

W. P. GRAY.

No. 675.—*Design for Brackets.*

I claim the ornamental configuration and design of brackets, as described.

ISAAC DE ZOUCHE.

No. 676.—*Design for Franklin Fire-Places.*

What is claimed by me is, the ornamental design of the front of the fire-place; also, that of the folding-blower, that of the top-plate, and that of the side.

NATHANIEL S. PRINCE.

No. 677.—*Design for Bar-Room Stoves.*

I claim the design for bar-room stoves, as set forth.

JACOB BEESLEY.

No. 678.—*Design for Stoves.*

I claim the design of the "Egg Stove."

DAVID STUART.

No. 679.—*Design for Wire Fences.*

I claim the combination and arrangement of the horizontal twists A above and below the rosettes B, as described, forming together (with the wire and rails) an ornamental design for a wire fence, characterized by a horizontal row of rosettes, combined with the wires so as to be intermediate or between every two horizontal parallel rows of the horizontal twists.

M. LACHENMAIER.

No. 680.—*Design for Stoves.*

I claim the configuration of the radials *a a a a a a a a*, in combination with the foliated formations *b b b b b b b b*, together with the drops *c c c c c c c c* and the staminated cornice *d d d d d d d d*.

HORACE W. ROBBINS.

No. 681.—*Design for Box-Stoves.*

I claim the design for box-stoves, as set forth.

JOSEPH STEWART.

No. 682.—*Design for Cooking-Stoves.*

I claim the ornamental design of each of the doors, and the side and front plates.

N. P. RICHARDSON.

ADDITIONAL IMPROVEMENTS.

No. 107, to original Letters Patent No. 9,796.—*For Improvement in Bog-Cutting Cultivators.*

The nature of the improvement consists in having the shank of the tooth provided with two shoulders *b b* on the back side, one above and the other below the timber, and a piece of cast-iron, of the length of the thickness of the timber, having flanges on the top, and a groove in the back side to exactly match and surround the front part of the tooth; so that, by driving in the key *a* in front of the shank, a common oblong square mortise in the timber will be exactly filled out, and the shank thus fastened more permanently than heretofore.

Claim.—The fastening of the tooth by matching the shank with another iron, having a head or flanges on it, whereby the action upon the wood is divided forward and downward, by means of which the key and mortise are saved from wear and injury.

EDMUND L. FREEMAN.

No. 108, to original Letters Patent No. 5,289.—*Improvement in Smu*

This invention consists in surrounding the original machine with a close case of metal or wood.

JACOB BENNER.

No, 109, to original Letters Patent No. 9,061.—*Improvement in Ploughs.*

Claim.—Attaching the rake or harrow, to be combined with the plough, to the rear-end of the mould-board, by means of a crooked cam-lever, or bar and swivel *g*, in combination with the hand-lever *i*, whereby said rake can be conveniently raised or lowered by rotating it upon its axis of connexion, to overcome obstructions, or to intercept its action.

DAVID SWARTZ.

No. 110, to original Letters Patent No. 10,105.—*For Apparatus for Opening and Closing Gates.*

This improvement consists in having a pendulous lever I hung to the frame H at *o*, and provided with a notch *n*, by which the weight of the gate is caused to be the means of holding the bottom to the point to which it is drawn, and at the same time holding down the vertical lever *f* until the vehicle has passed over it; thus preventing any appendages of the vehicle from catching the said lever; *s h* are arms, against the ends of which the pendulous lever I rests when the vertical lever *f* is pressed down to a horizontal position.

Claim.—The application of a pendulous lever provided with a notch, or its equivalent, in the manner and for the purpose as above set forth.

SAMUEL G. DUGDALE.

No. 111, to original Letters Patent No. 9,330.—*For Improvement in Grinding-Mills.*

The improvement secured is in making the frontal projections of the teeth on the cylinder more serrated and finer, so as to operate on smaller grain.

Claim.—1st. The shortening of frontal projection of each tooth in such a manner as to form a notch in their tops.

2d. The corrugated ribs and concave, in combination with the teeth and corrugated cylinder; these teeth having their frontal projections shortened or notched on their tops, or with teeth without their frontal projections being shortened or notched on their tops, either or both, substantially for the purposes set forth.

OLDIN NICHOLS.

No. 112, to original Letters Patent No. 9,168.—*Improvement in Looms for Weaving Figured Fabrics.*

Claim.—The bell-crank lever V^2 when kept in connexion with the grooved collar U^2 by a spring, or its equivalent, in combination with the lever F^2 and its connecting-rod H^2, or any mechanical equivalent therefor, when the lever F^2 is operated upon by a filling-thread stop-motion, when the filling-thread breaks or becomes expended.

Also, the pattern chain s^2, composed of lags having projections or segment-flanges on the top, and blank lags having no projections on the top, for the purpose of operating rise and fall shuttle-boxes therewith in power-looms, for weaving figured fabrics.

SAMUEL ECCLES.
JAMES ECCLES.

No. 113, to original Letters Patent No. 9,328.—*For Harness Saddle-Trees.*

This is an improvement additional to the subject-matter of a patent granted to the same, October 12, 1852, and consists in constructing the tree with a loose cantle-plate C, kept in place against the rim *b* and upon the projections *c*, by the shoulder *e* of the crupper-loop B on the shank D, which itself is retained by the passage of the pad-hook through the openings *a*. By this means the saddler is enabled to draw the covering over the tree-seat, and, thrusting the ends into the space *s*, bind them close by the cantle-plate C.

Claim.—The construction of harness saddle-trees with the loose cantle C, in combination with the crupper-loop B, or its equivalent, constructed, arranged, and operating substantially as hereinbefore set forth, for the purposes specified.

THOMAS MARDOCK.
WILLIAM C. KELLAR.

No. 114, to original Letters Patent No. 7,373.—*Improvement in Machines for Polishing Raw-Hide Whips.*

In the figure, A represents the frame, B B the rollers, and C the polishing-belt. To one side of the frame A is hinged a flat board E, extending across the frame, so that when the whip is laid on the belt C, pressure on this board by hand or counterpoise weight will regulate the cutting of the polishing-belt.

Claim.—The combination of the endless-belt C with the bearer E, as described, for smoothing and polishing raw-hide whips, the operation being as hereinbefore set forth; said bearer furnishing the facility for examining the progress of the operation.

CHARLES BAEDER.

No. 115, to original Letters Patent No. 10,551.—*Improvement in Whiffle-Tree Hooks.*

This additional improvement consists in substituting for the spring-bar a rolling-latch D pivoted at *a*, and falling into the lip *c*, where it is retained by the flat-spring F.

M. Newman 2d.
N. C. Whitcomb.
G. C. Cole.

No. 116, to original Letters Patent No. 11,705.—*Improved Safety Washer for Securing Wheels to Axles.*

This improvement consists in making a safety washer without that portion of the flange standing at right angles with the linch-pin slot.

Wm. Thornley.

No. 117, to original Letters Patent No. 11,121.—*For improvement in the Construction of Reed Musical Instruments.*

The improvement consists in connecting the hammers with the keys in such a manner as to insure a prompt and certain action. The hammer E has a thin metallic spring *a* fastened to the bottom, and terminating in an angular bend at the top, and so bent as to spring outward. The valve-pin F, which opens the valve G, has an angular point at *c*; the key, being pressed downward, carries with it the key lever, which also carries down the valve-pin opening the valve; and by the same motion the point *c*, coming upon the spring *a*, carries the hammer with it, until, by turning upon its axis, it is released and falls back as before; the valve-pin, in returning, passes the spring *a* by forcing it outward.

F. A. Gleason.

DISCLAIMERS.

Improvement in the Figure Power-Loom.

Your petitioners, therefore, hereby enter their disclaimer to that part of the aforementioned specification which commences, "The modes of elevating and depressing the lifter," and ends, "true and essential principle of my invention is preserved," being the fourth paragraph from the end of said specification; and also enter their disclaimer to the *first*, *second*, and *fourth* claims of said patent; which disclaimer is to operate to the extent of the interest in said letters patent vested in your petitioners.

M. A. Furbush.
George Crompton

Improvement in Sewing Machines.

Your petitioner, therefore, hereby enters his disclaimer to that part of the claims in the aforenamed specification which is in, or substantially in the following words, to wit: "Also, the use of a cop without a spindle or spooler, in combination with a shuttle, or its equivalent, when the thread is drawn from the inside of the cop; by which means I retain a uniform draught on the cop-thread as it is drawn or paid out from the shuttle, as described."

T. C. THOMPSON.

Improvement in the Manufacture of Starch.

Your petitioner, therefore, hereby enters his disclaimer to so much of the said first claim as may be construed as claiming, as the invention of the said Jones, the treatment of the whole matter of the grain in caustic alkaline solutions, as a means of disintegrating and decomposing the silicious and albuminous matters of the coating of the grain, inasmuch as said treatment for that purpose alone was known prior to the invention of said Jones; and such treatment alone, irrespective of the treatment of the farinaceous matter in caustic alkaline solutions, to effect the separation of the starch from the other constituents of such matter, made no part of the invention of said Jones; the object of this disclaimer being to limit the said first specification of claim of the said Jones to the process of separating the starch from the albumen and gluten of the farinaceous matter of the grain, by treatment in caustic alkaline solutions, and this, also, in combination with the treatment of the grain in caustic alkaline solutions as a means of saponifying the oils, and decomposing the silicious and albuminous matters of the coating of the grain.

SAMUEL BLATCHFOD, *Administrator of*
ORLANDO JONES, *deceased.*

Improvement in the Mode of Communicating Information by Signals, by the Application of Electro-Magnetism.

TO THE COMMISSIONER OF PATENTS:

The petition of the Maine Telegraph Company, a corporation chartered by the legislature of the State of Maine, in the year 1848, respectfully represents:

That said corporation has, by assignment and conveyance duly recorded in the Patent Office, become the owner of the exclusive right, through said State of Maine, to use the electro-magnetic telegraph instruments invented by Samuel F. B. Morse, now of Poughkeepsie, in the State of New York, for which letters patent of the United States were issued to said Morse in the year 1848; that said company has reason to believe that, through inadvertence and mistake, the claim made in the

specification of said letters patent—that is to say, that denominated the eighth claim—is too broad, including that of which the said patentee was not an inventor.

Your petitioners, therefore, hereby enter disclaimer to such part of said eighth claim in the aforenamed specification as has been decided by the Supreme Court of the United States, at its recent sitting at Washington, to be too broad. Said eighth claim is in the following words, to wit:

"Eighth. I do not propose to limit myself to the specific machinery or parts of machinery described in the foregoing specification and claims, the essence of my invention being the use of the motive power of the electric or galvanic current, which I call electro-magnetism, however developed, for making or printing intelligible characters, signs, or letters, at any distances, being a new application of that power of which I claim to be the first inventor, or discoverer."

Which disclaimer is to operate to the interest in said letters patent vested in your petitioners, who have paid ten dollars into the treasury of the United States, agreeably to the requirements of the act of Congress in that case made and provided.

HIRAM O. ALDEN, *President of Maine Telegraph Co.*
JAMES EDDY, *Secretary of Maine Telegraph Co.*

Improvement in the Mode of Communicating Information by Signals, by the Application of Electro-Magnetism.

Your petitioner, therefore, hereby enters his disclaimer to so much of said claim as includes the use of the motive power of electro-magnetism for marking or printing intelligible characters, signs, or letters, at any distances, except when such motive power is developed by the combination of a long galvanic circuit, a contrivance for closing and breaking the circuit, an electro-magnet, armature, and spring, or their equivalents, substantially as set forth in said specification.

SAMUEL F. B. MORSE.

Improvement in the Mode of Communicating Information by Signals, by the Application of Electro-Magnetism.

Your petitioners, therefore, hereby enter their disclaimer to so much of said claim as includes the use of the motive power of electro-magnetism for marking or printing intelligible characters, signs, or letters, at any distances, except when such motive power is developed by the combined action of the long galvanic circuit, a contrivance for closing and breaking the circuit, an electro-magnet, armature, and spring, or their equivalents, substantially as set forth in said specification.

[L. S.]

WILLIAM H. SWAIN, *President.*
JOSEPH SAILOR, *Secretary.*
B. B. FRENCH.
A. J. GLOSSBRENNER.
J. M. BRODHEAD.

Improvement in the Mode of Communicating Information by Signals, by the Application of Electro-Magnetism.

Your petitioner, therefore, hereby enters his disclaimer to so much of said claim as includes the use of the motive power of electro-magnetism for marking or printing intelligible characters, signs, or letters, at any distances, except when such motive power is developed by the combination of a long galvanic circuit, a contrivance for closing and breaking the circuit, an electro-magnet, armature, and spring, or their equivalents, substantially as set forth in said specification.

ALFRED VAIL. [L. S.]

Improvement in the Mode of Communicating Information by Signals, by the Application of Electro-Magnetism.

Your petitioners, therefore, hereby enter their disclaimer to as much of said claim as includes the use of the motive power of electro-magnetism for marking or printing intelligible characters, signs, or letters, at any distances, except when such motive power is developed by the combined action of the long galvanic circuit, a contrivance for closing and breaking the circuit, an electro-magnet, armature, and spring, or their equivalents, substantially as set forth in said specification.

JOHN BUTTERFIELD,
President New York, Albany, and Buffalo Telegraph Co.
WM. J. BACON, *Secretary.*
SILAS D. CHILDS.
J. V. P. GARDNER.
T. S. FAXTON.
GEORGE CURTIS.

Improvement in Boilers for Culinary Purposes.

Yonr petitioners, therefore, enter the following disclaimer:

We do not claim the employment of a metallic tube or tubes extending down at or near the side or sides of culinary vessels, to carry off the steam or gases into the stove, grate, or range on which they may be placed, in any other manner than when the said tube or tubes shall terminate at the bottom of the flange *a*, substantially in the manner and for the purposes specified in the said patent.

GOODRICH, SEAVEY, & Co.

Improvement in Sewing Machines.

Your petitioners, therefore, have entered their disclaimer to that part of the claim in the aforenamed specification which is in the following words, to wit:

"The arrangement, above described, in a sewing machine, for feeding the cloth along, consisting of a notched bar, which has a vertical or up-

and-down motion for fastening the cloth upon and releasing it from the notches of said bar, by striking it against a yielding plate; and a lateral motion, or motion forward and back, for feeding the cloth along after each stitch, substantially as above set forth;" which disclaimer is to operate to the extent of the interest in said letters patent vested in your petitioners; said interest being the exclusive right to manufacture said invention throughout the United States, and the exclusive right of using and vending said machine, excepting in such places as said right of using and vending has been conveyed by them to others, as will fully appear of record.

WILLIAM O. GROVER. [SEAL]
ORLANDO B. POTTER. [SEAL]
ORLANDO B. POTTER, } [SEAL]
WILLIAM O. GROVER, }
Attorneys for Wm. E. Baker, and in his stead.

EXTENSIONS.

For Improvement in Shuttles for Weaving Cloth.

What I claim, therefore, as my invention, and desire to secure by letters patent, is the above-described mode of furnishing the shuttle with a spring and catch in one piece, and so applying the spring to the spindle, as that the rounded end H of the head of the spindle shall come in contact with the spring, and by turning the spindle the catch is moved so as to release or receive the bobbin without any other operation.

JAMES BALDWIN.

Improvement in Machines for Husking and Shelling Corn.

I do not claim to be the first to have constructed a machine for shelling corn by the aid of a revolving conical nut, furnished with teeth, and placed within a curb; nor do I claim to be the first to have used spring-staves to bear the corn up against the revolving-nut; but what I do claim in the above-described machine is, the manner in which I have arranged and combined the hinged-staves, furnished with springs, with the stationary pieces F F, so as to allow the said staves to spring out without opening the joints between them; the whole being constructed substantially in the manner and for the purpose set forth.

SAMUEL S. ALLEN.

Improvement in Mode of Coloring Maps.

I do not claim the invention of coloring through patterns, or theorems, as they are sometimes called; but I do claim as my invention,

and desire to secure by letters patent, attaching the patterns to a plate revolving on a fixed centre, as herein set forth, and the combination of the revolving plate with the table on which the map is placed, the whole connected and operating as above described.

LUCIUS STEBBENS.

Improvement in the Machine for Crushing Hard Substances.

1st. That which I claim as my invention, and desire to secure by letters patent, is the mode herein described of preventing the grinding-wheels from slipping, by means of the cog-gearing, or by cross-projections and indentations in the bottom of the valley, together with cuts, cogs, or notches on the tread of the grinding-wheels.

2d. The method of applying the weight of the centre revolving-shaft, or any additional weight which may be applied thereto, to the grinding or crushing-wheels, by making the shaft bear upon the vibrating-beam, to which the wheels are attached, as herein described.

JAMES ROWE.

Machine for Forming the Web for Cloth of Wool, Hair, or other suitable Substance, without Spinning or Weaving.

I do not claim as my invention the carding-machines, or any part thereof, in common use; but I do claim the combined use of them, as here described, for the purpose of crossing the fibres of the material of which cloth may be made, in the manner and on the principle herein described, and the new machinery necessary to effect that object, particularly the comb-carrier, the shears, the fallers, and cams, with their several appendages, as hereinbefore described and applied, and therefore I solicit an exclusive right by letters patent.

JOHN ARNOLD.

Improvement in Life-Protectors.

What I claim as my invention, and desire to secure by letters patent, is the combination of the air-tight tubes with the belt, in the manner and for the purpose described.

RALPH BULKLEY.

Improvement in the Machine for Cutting Corks.

1st. I claim rounding and forming the cork by means of the revolving circular knife, in combination with a movable feeding frame, operated by means of the arm Y Y and roller *z*, working with the eccentric groove or cam-work *a a a*, arranged on the shaft F F; the whole constructed and operating substantially in the manner and on the principles above described.

2d. I claim sharpening the revolving knife, *while in operation*, by means of a revolving whetstone, operated as above described.

3d. I claim revolving *both holders* by means of the system of bands and pulleys above described, thereby effectually preventing the liability to twist the cork while in the process of formation.

4th. I claim the combination of the inclined plane *i*, bent rod *e c*, fork *h*, and spiral spring *f f*, operating together as above described, to withdraw the holder W, for the purpose above set forth.

5th. I claim the combination of the movable inclined plane or latch b^2, and catch d^2, with the bent lever Y Y^1, operating with the pulleys W *r*, wheel *v*, and spring *x*, on the axis P P, in the manner and for the purpose above described.

SAMUEL SAWYER.

Improvement in the Mode of Communicating Information by Signals, by the Application of Electro-Magnetism.

What I claim as my invention, and desire to secure by letters patent, is as follows:

1st. The formation and arrangement of the several parts of mechanism constituting the type-rule, the straight port-rule, the circular port-rule, the two signal-levers and the register-lever, and alarm-lever with its hammer, as combining respectively with each of said lever one or more armatures of an electro-magnet, and as said parts are severally described in the foregoing specification.

2d. The combination of the mechanism constituting the recording cylinder, and the accompanying rollers and train-wheels, with the formation and arrangement of the several parts of mechanism, the formation and arrangement of which are claimed as above, and as described in the foregoing specification.

3d. The use, system, formation and arrangement of type, and of signs, for transmitting intelligence between distant point by the application of electro-magnetism and metallic conductors, combined with mechanism described in the foregoing specification.

4th. The mode and process of breaking and connecting by mechanism currents of electricity or galvanism in any circuit of metallic conductors, as described in the foregoing specification.

5th. The mode and process of propelling and connecting currents of electricity or galvanism, in and through any desired number of circuits of metallic conductors, from any known generator of electricity or galvanism, as described in the foregoing specification.

6th. The application of electro-magnets by means of one or more circuits of metallic conductors, from any known generator of electricity or galvanism, to the several levers in the machinery described in the foregoing specification, for the purpose of imparting motion to said levers, and operating said machinery, and for transmitting by signs and sounds intelligence between distant points, and simultaneously to different points.

7th. The mode and process of recording or marking permanently signs of intelligence transmitted between distant points, and simultaneously to different points, by the application and use of electro-magnetism or galvanism, as described in the foregoing specification.

8th. The combination and arrangement of electro magnets, in one or more circuits of metallic conductors, with armatures of magnets, for transmitting intelligence by signs and sounds, or either, between distant points, and to different points simultaneously.

9th. The combination and mutual adaptation of the several parts of the mechanism, and system of type and signs, with and to the dictionary or vocabulary of words, as described in the foregoing specification.

SAMUEL F. B. MORSE.

Improvement in the Cotton Gin.

What I claim as my invention, and which I desire to secure by letters patent, consists in the arrangement of the vibrating saw C, grated hopper B, adjustable plate M, and grooved drawing-roller N, for separating the seed from cotton, in combination with the receiving-roller *s*, and the advancing and receding comb X, for discharging it, as herein set forth.

FONES MCCARTHY.

Improvement in the Expanding and Contracting of Universal Chuck for Lathes.

I do not claim to be the inventor of the above-described mode of working the holders, by means of the convolute groove; but what I do claim as my invention, and desire to secure by letters patent, is the method of securing together the front and back plates by means of the tube and nut, by which I am enabled to attach the front plate directly to the mandrel or face-plate of the latter, all as above described, in like manner.

I do not claim as my invention the rim on the front plate; but what I do claim as my invention is, providing the rim with apertures, through which the slides or holders can pass, for the purpose and in the manner above described.

SIMON FAIRMAN.

Improvement in the Mill for Breaking and Grinding Bark.

What we claim as our invention, and desire to secure by letters patent, is the combination of the conical nuts (one or more) with the cylinders, placed concentrically, as herein mentioned and described, and constructed, arranged, and connected in the manner herein de-

scribed, and provided with teeth and pickers, arranged as is also herein mentioned and set forth.

RICHARD MONTGOMERY.
LEWIS W. HARRIS.

Improvement in the Machine for Boiling and Washing Rags for Manufacturing Paper.

What I claim as constituting my invention, and desire to secure by letters patent, is, first, the construction and use of a cylindrical revolving boiler and washer, the interior of which is divided into four, or any other convenient number of compartments, by grated partitions, within which the rags are to be subjected to the action of high steam, and of an alkaline solution, in the manner and for the purpose herein set forth; the whole being constructed and operating substantially in the manner described.

GEORGE SPAFFORD.

For Reducing Worn-out Cloths and Silks, of various kinds, to the Fibrous state, so as to be capable of being Manufactured into Cloth.

I do not claim the mere use of cylinders, furnished with teeth or points, for the purpose of tearing or reducing woollen or other rags into fibres; but what I do claim as constituting my invention, and desire to secure by letters patent, is the use of cylinders, furnished with teeth or points, and operating under water or other fluids, in a machine similar, in its general form, to that used by paper-makers in preparing their pulp, but combined with the concave of small cylinders E E, and operating substantially in the manner of that herein fully described and made known.

REUBEN DANIELS.

Improvement in the Machine for Cleaning Wool from Burs and other Foreign Matter.

Having thus fully described the nature and operation of my machine for cleaning wool and picking cotton, what I claim therein as constituting my invention, and desire to secure by letters patent, is the manner of applying and using the vibrating doffer, with its comb-plates, constructed and operating as herein set forth, in combination with the toothed guard-plate, as described; and this I claim, whether the respective parts be formed exactly as herein represented, or in any other way which is substantially the same, producing a like result by analogous means.

MILTON D. WHIPPLE.

Improvement in the Manner of Constructing Padlocks for Mail-Bags, and other uses, called the Clam-Shell Padlock.

Having thus fully described the construction and operation of my improved mail-bag padlock, what I claim therein as constituting my invention, is, first, the forming of the shell, or case, of two pieces of plate-metal, raised and adapted to each other in the manner set forth. I do not claim the raising of metal by means of dies, this being a well-known process; but I limit my claim to the manner in which I have adapted the raised plates to the forming of the shell of a padlock, instead of making it by casting or by joining a rim on to wrought metal, as, by the adaptation, I have not only improved the form, but have given additional strength, and that at a diminished cost.

Secondly, I claim the manner of combining the bow, or hasp, with the shell of the lock, without the use of a joint-pin, as herein fully set forth.

Thirdly, I claim the manner of forming and using the spring-hooks, as described, the springs being so arranged as to be brought into action by the shutting of the hasp, and by the turning of the key, and causing the hasp to fly out by the pressure of the springs against the inclined point of the catch. It will be manifest that variations may be made in the manner of forming and arranging the respective parts of the lock, herein described; and I do not intend, therefore, to limit myself in this respect. The springs may be made in separate pieces, and attached to the spring-hooks, and other changes of a similar kind may be introduced in other parts, whilst the instrument will remain substantially the same, producing a like result by analogous means.

SOLOMON ANDREWS.

Improvement in the Mode of Constructing a combined Caldron and Furnace, for the use of Agriculturists and others.

What I claim in the above described apparatus as of my invention, and which I desire to secure by letters patent, is the combining of the portable furnace with the caldron or boiler, by elevating the sides of said furnace, and connecting therewith the sectional side-pieces, which constitute a flue surrounding the caldron or boiler; the whole being constructed, combined, and operating substantially in the manner and for the purpose herein fully set forth.

JORDAN L. MOTT.

Improvement in the Mode of Regulating Waste Steam in Locomotive Steam-Engines.

I do not claim the plan of increasing the natural draught, by causing the steam from the cylinders to enter the chimney through diminished orifices; but I do claim as my invention, desiring to secure the same by letters patent, the plan of increasing or diminishing the force with

which the steam from the cylinders enters the chimney at the pleasure of the engine-man, while the engine is in use or motion, by enlarging or contracting the orifices of the escape-pipes, increasing or diminishing thereby, at pleasure, the draught of the chimney in the manner above set forth; not intending by this claim to limit myself to the precise arrangement of the respective parts as herein described, but to vary the same as I may think proper, whilst I attain the same end by means substantially the same.

Ross WINANS.

Improvement in the Machine for Cutting Paper and Trimming Books.

What I claim as my invention, and desire to secure by letters patent, is the peculiar mechanical combination used to give a lateral or sliding motion to the knife, which consists of the inclines or cams formed on the frame F, working on the cams *g g*, the connecting-rods P P, and the frame O, for the purpose and in the manner specified.

Also, I claim the mechanical construction of the press, as arranged and combined with the parts for cutting, thereby forming an entire machine for the purpose described.

FREDERICK J. AUSTIN.

Improvements in the Method of Constructing Clocks.

The invention claimed, and desired to be secured by letters patent, is, 1st, the rotary pendulum;

2d, the rotary hammer in the striking part of a clock;

3d, the connexion between the striking and time part of a clock, by which the time part is driven; all as herein described, and for the purposes hereinbefore set forth.

AARON D. CRANE.

Machine for Rolling Puddle-Balls or other Masses of Iron in the Manufacture of Iron.

What I claim as constituting my invention, and desire to secure by letters patent, is the preparing of the puddler's balls as they are delivered from the puddling furnace, or of other similar masses of iron, by causing them to pass between a revolving cylinder and a curved segmental trough adapted thereto, constructed and operating substantially in the manner of that herein described and represented in figures 2 and 3 of the accompanying drawings, or by causing the said balls to pass between vibrating or reciprocating tables, surfaces, or plates of iron, in the manner exemplified in figure 1 in the accompanying drawings, or between vibrating or reciprocating curved surfaces, operating upon the same principle, and producing a like result, by analogous means.

H. BURDEN.

Improvement in Spark-Arresters.

The undersigned claims as his own invention the combination of the plate H and A, constructed in the manner described above, having a wire gauze arranged between them, with the casing surrounding the chimney of the locomotive, in the form as set forth.

DAVID MATTHEW.

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